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PUBLIC FORUM ON OFFSHORE DRILLING

TRANSCRIPT OF PROCEEDINGS

TUESDAY, AUGUST 24, 2010

9:04 A.M. TO 12:30 P.M.

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SANTA BARBARA, CALIFORNIA

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PANEL I:

BRENDA KELLY
DAN GREMAUD
EARL PIERMATTEI
YARKO "JJ" SOS

PANEL II:

LINDA KROP
KEITH WENAL
ROB HURLEY
MARK STEINHILBER

PANEL III:

LIEUTENANT GOVERNOR ABEL MALDONADO
CONGRESSWOMAN LOIS CAPPS
MAYOR HELENE SCHNEIDER
MAYOR PRO TEM MARGARET CONNELL
BOARD OF SUPERVISORS CHAIR JANET WOLF

TUESDAY, AUGUST 24, 2010; SANTA BARBARA, CALIFORNIA

9:04 A.M.

DIRECTOR BROMWICH: Good morning, everyone.

My name is Michael Bromwich. I'm the director of the Bureau of Ocean Energy Management, Regulation and Enforcement. And I want to welcome everyone to our fourth public forum on offshore drilling and safety.

As I think many of you know, on July 7th, the Secretary of the Interior directed me to hold a series of public forums around the country to explore a set of issues on offshore drilling and offshore drilling safety.

In his July 12th moratorium order, Secretary Salazar indicated that the bases for the continuing moratorium were three: first, drilling and workplace safety; second, spill containment; and, third, spill response.

So the purpose of these public forums has been to gather and collect information on these three issues and on related issues, to bring that information back to the Secretary so that he and I and the rest of the group at the Interior Department can make informed decisions on whether and in what

ways to modify the moratorium which is currently scheduled to expire on November 30th.

We have been very fortunate in the panelists that have appeared in our forums so far, and we are similarly very fortunate today.

As I said, the purpose of these forums is to gather relevant information, and we've designed the panels today with that very purpose.

We'll have a total of three panels. Panel I is before you, and I will introduce them in a couple of moments. We'll then have a second panel without a break this morning. Then we'll have a break, and then we'll have a third panel of distinguished area elected officials.

So to kick things off and to introduce the subject matter, let me start with a presentation.

As I've said, the purpose of these forums is to gather information on both drilling and workplace safety, as well as spill containment, and spill response.

As you can see from the slide, the current suspensions of deepwater drilling and permitting are in effect until November 30th or until such earlier time as the Secretary determines the deepwater drilling operations can continue and proceed safely

with robust health and environmental protections in place.

The Secretary directed me and my agency to collect a combination of public and expert input on these issues; the issues being, as I've said before, drilling and workplace safety, spill containment, and spill response.

We are exploring through the gathering of this information whether any modifications to the scope or the duration of the current deepwater drilling suspensions, that is, the moratorium, should take place based on the risks associated with different kinds of deepwater drilling.

We're very interested in hearing from our panels, but we're also very interested in hearing from the public. There are comment cards that are available outside this room. In addition to that, there are means to submit comments through the Web, and the address is at the bottom of this slide.

There's no question that offshore drilling has come to occupy a significant role in our economy and in our -- the present of our energy production and consumption.

Literally tens of thousands of workers are currently employed in the offshore oil and gas

industry, the bulk of them in the Gulf, many of them in the state of Louisiana.

And as we all know, domestic energy production is central to the health of our economy. It's also central to energy independence and, indeed, to our national security.

But as we've learned with the Deepwater Horizon tragedy, we have to take steps to ensure that offshore drilling is conducted in both a safe and an environmentally sound manner.

If any of us had any doubts about what the risks were before Deepwater Horizon, I think those questions were tragically answered. We know that 11 rig workers died in the Macondo well blowout and fire.

And we also know that the Deepwater Horizon blowout and subsequent spill has had a dramatic effect on the ocean and coastal environments throughout the Gulf of Mexico. Literally hundreds of miles of shoreline and wetlands have been affected by the Deepwater Horizon oil spill; some in visible ways and some in ways that are not yet visible.

The spill has also had a major impact on the set of industries that are collected in the

Gulf, including the fishing, shrimping, tourism, commercial retail, and other related industries.

We don't yet know what the full set of causes are for the Deepwater Horizon blowout. As I think many of you know, there are a set of investigative bodies that are looking at those issues right now, including a joint investigation by my agency and the Coast Guard, which is holding hearings right now in Houston, as well as the President's Commission, as well as a number of other fact-finding bodies.

By the end of those investigations, I feel confident that we will know a lot more than we know now. But it does appear that human error may have played a role, perhaps a significant role in the accident.

Let's move a little closer to some of the issues that we're going to be talking about in our panels today. And our focus will, in part, be on what we call personnel accountability and operational safety.

Investigations and reports by my agency and other parts of the Interior Department have suggested that unsafe offshore drilling operations are frequently the result of human error, operator

error, as opposed to mechanical error.

We are currently in the process of developing a rule that would require all operators on the Outer Continental Shelf to adopt for the first time a comprehensive systems-based approach to both safety and environmental management that will incorporate best practices not only from the U.S., but from around the world.

We're interested in hearing what the panel's thoughts on these issues are as well as what your thoughts are about improving personnel accountability procedures in order to ensure operational safety.

A little bit of background:

On April 30th of this year, within days of the Deepwater Horizon blowout, my agency and the Coast Guard issued a safety alert recommending that operators and drilling contractors adopt a series of workplace safety measures, and those are laid out on this slide. And I'll just cover them very briefly.

They are to remove -- review all emergency shutdown and dynamic positioning procedures that relate to emergency control operations;

To inspect lifesaving and firefighting equipment to make sure that they comply with federal

requirements;

To ensure that all crew members aboard rigs are fully familiar with emergency and firefighting equipment, as well as having participated in critical abandon ship drills;

To exercise emergency power equipment to ensure through tests that they operate adequately and appropriately;

And, finally, to ensure that all personnel involved in well operations are properly trained and are fully capable of performing all their required tasks under both normal drilling conditions as well as emergency well control operations.

Again, by way of background, there are current personnel training requirements that are in effect. That's the CFR site for where the requirements appear.

And in short, those requirements currently require that each lessee develop and implement a training plan that includes procedures for training in well control; evaluating the training programs of contractors; verifying that all personnel that are engaged in well control or production safety operations can, in fact, perform their assigned duties; assessing the training needs of employees on

a regular basis; making sure that recordkeeping and documentation are adequate; and providing for internal audits, which is obviously a key step in the process.

Now, my agency has the authority to periodically assess these training programs through training systems audits, interviews, or testing of personnel. So we have a variety of tools at our disposal. We have been somewhat limited in using them because of manpower shortages in recent years.

However, if our agency determines that a lessee's training program is not in compliance with all the existing rules, we can initiate one or more enforcement actions, which includes issuing what are called INCs, that is incidents of noncompliance, and/or assessing civil or criminal penalties.

What we'd like to discuss today are what are the additional safety training and certification requirements that would be conducive to having even stronger workplace safety on drilling rigs.

And so the major questions that are teed up for our panelists and for discussion today are:

Number 1, what additional safety training requirements are necessary for drilling rig personnel?

Second, should there be a requirement for independent or more frequent certification and testing of personnel and safety systems?

And No. 3, how can we promote a greater culture of safety in offshore drilling?

So those are our big questions, the third question probably the biggest of all.

So that concludes the initial presentation.

And let me introduce to you both my colleagues from the Bureau of Ocean Energy Management, as well as the panelists on our initial panel.

Sitting to my immediate left is Ellen Aronson. Ellen has been with the agency for a number of years and is currently the regional director of the Bureau of Ocean Energy Management, Regulation and Enforcement here in the Pacific.

She's got over 30 years of experience in energy policy and is responsible currently for managing the day-to-day administration of the agency's programs for federal submerged lands in offshore California, Oregon, Washington, and Hawaii.

Under her direction, the regional office regulates oil and gas operations on 23 Outer Continental Shelf facilities which are on 43 leases,

offshore Southern California, while she is also actively working with Pacific states to explore future opportunities for safe, environmentally responsible offshore renewable energy development on the Outer Continental Shelf.

Sitting to Ellen's left is Bill Hauser. Bill has been doing a series of these forums with me.

And thank you for that, Bill.

Bill is the chief of the Rules and Standards Branch of the agency and has served in a headquarter capacity for approximately 20 years. Earlier in his career, Bill served as a petroleum engineer in the Alaska region.

And the general format is we'll be hearing presentations from our panelists who I'm about to introduce. And then Ellen and Bill and I will ask them questions that arise out of their presentations.

Let me introduce first our distinguished first panel. The first person sitting immediately to Bill's left is Brenda Kelly. Brenda is the director of Accreditation and Certification for the International Association of Drilling Contractors.

Sitting to Brenda's left is Dan Gremaud.

Dan is a safety and training specialist with Nabors Well Services.

Sitting to Dan's left is Earl Piermattei, who is a senior engineer with Ben C. Gerwick, Inc., consulting engineers.

And sitting to Earl's left is Yarko "JJ" Sos with Check 6, Inc.

So with that, thank you very much, panelists, for being with us today and enhancing our knowledge of workplace safety on drilling rigs.

And, Brenda, without anything further, let me turn it over to you.

BRENDA KELLY: Good morning. I'm representing the International Association of Drilling Contractors this morning. The organization is a member organization supporting the petroleum industry worldwide, all aspects of the industry.

It's not just drilling contractors anymore. It's the operators. It's the service companies. We have regulatory bodies worldwide participating in our organization and contributing to all of our programs and processes.

The safety in our industry, safety and training is particularly important to IADC, and today I want to give just an illustration of how

important this is to us.

Our president, Lee Hunt, is currently this very moment in Havana, Cuba, speaking with the Cuban government and with the Cuban national oil company, promoting safety in our industry, promoting best management practices, and inviting them to participate in the International Regulators' Forum to participate worldwide on the development of safety and training programs.

Part of their conversation today will surely be about the Well Control Accreditation Program, which is what I'm speaking about this morning. The Well Control Accreditation Program, known as WellCAP, is a training standard that has been developed by our members and is implemented worldwide.

The training standard includes elements of both knowledge -- knowledge development and critical job skills demonstration. The specifics of the training requirement include items like setting specific course length, instructor qualifications. And particular items that are very important to the development of competency of our personnel is simulator or live well practical exercises that are a part of each and every class.

The WellCAP requirements also include testing both of knowledge and of the practical skills. The standard includes administrative processes that assure that there's quality control, consistent delivery around the world based on the course, the course level, consistently applying.

We also require certification of each individual going through the training. Records of the training is retained by IADC as permanent records.

And the final critical piece of this standard is the -- is what I would call the quality control piece. It's external as well as internal verification that all of the training providers deliver according to the standard, that they continue to adhere to that standard.

We have external auditors, contract auditors through Det Norske Veritas, as well as other organizations around the world that provide audit services for us.

One thing that's very important to this WellCAP program is that it's not a one-time development of a program. It's an ongoing process of review of the curriculum, the various control aspects of the program to make sure that we keep our

programs current, meeting the needs of the industry, and meeting the needs of our industry personnel.

I want to give just a really quick view of WellCAP, what it looks like today at this moment in time.

There are multiple courses, individual standalone courses for drilling, work-over and completion, coiled tubing, snubbing, wireline, and underbalanced drilling.

There are four levels of training for each of these courses: an introductory level, a fundamental level, supervisory level, and what we refer to as the WellCAP Plus, which I'm going to speak more to in just a moment.

These courses also may be designed for surface stack equipment or for a combination of surface and subsea equipment.

The introductory level is for floorhand and derrickman. The fundamental level is for the derrickman also, assistant driller, and driller.

The supervisory level is for tool pusher, the driller tool pusher, superintendent, and the drilling foreman.

And the WellCAP Plus Program is for experienced operations personnel. This piece of the

program is stepping the program above and beyond training, leading the personnel to development of competence.

Through the WellCAP Plus Program, the trainees are introduced to real-life well control scenarios. And they must work through those as a team, just like the situation would be if they were on a rig and an incident occurred.

So this WellCAP Plus Program is, in effect, building the competencies of our personnel by practicing with real-life scenarios, evaluating their performance compared to -- again, to the real-life scenario.

WellCAP is very much a worldwide standard. Currently there are 149 training providers operating in 59 countries around the world. Training is conducted in 15 languages with more than 500 instructors delivering the training.

The WellCAP standard is accepted by governmental bodies -- and you can see those listed on the screen. I won't read those -- and by national oil companies. I want to point out that Saudi Aramco, for example, requires all personnel within the country have WellCAP training.

This training is also endorsed by the

Offshore Operators Committee and is used by operators in the U.S. Gulf of Mexico, virtually required by all personnel -- required for all personnel in the Gulf of Mexico.

Some of the operators and contractors delivering -- accredited to deliver this training and adopting it as their internal standards are listed.

I want to wrap up with a couple of final points.

This is from Petrobras in 2006. They initiated the WellCAP training in 1996. Ten years later they reported a glowing -- very much a glowing report. They indicated that as they implemented the WellCAP training, they saw with the increase in training a rapid decrease in the incident rate to the point that they experienced an 85 percent reduction in incident rate following the introduction of the WellCAP program.

WellCAP is -- as I said, it's very much a continuous effort to improve the program. I've listed some of the things that our Well Control Committee is currently looking at as ways to enhance and strengthen the program.

There's considerate -- there is work being

done on the development of a test question database.

There is development of a Quality Assurance Advisory Panel to oversee -- as an external body, overseeing the quality control of all of the IADC accreditation programs, which include programs like Ballast Control and basic rig safety program like our Rig Pass Program.

And there's also a review process under way for our IADC knowledge skills and abilities which include well control competencies. Those are being reviewed with a discussion of how we might ex- -- whether we might need to expand the well control competencies at this time.

And my closing point, IADC is accredited by ISO 2009 -- the 200- -- 9001 2008 standard for the development of industry accreditation standards and for the accreditation of training providers to deliver training to the standard.

And with that, I thank you.

DIRECTOR BROMWICH: Thank you very much.

Dan.

DAN GREMAUD: Good morning. I would like to thank Director Bromwich and Dr. Alan Thornhill for inviting me here to speak today.

As a 20-year safety professional, my

comments today will focus on safety culture in the offshore drilling industry and where I think that we need to head as an industry.

As a company, from the president to the new employee in training, we constantly drive home the importance of safety as a lifestyle because we want everyone to go home safe at the end of the day.

Nabors was the recipient of the Association of Energy Service Companies' Gold Award 12 out of the last 13 years. That's a record unmatched by any of our competitors, and one of the biggest factors behind that is the safety culture.

So what I would like to talk about this morning for a couple of minutes is some of the key ingredients that make up a strong safety culture and some of the barriers that prevent companies from implementing a total safety culture and then what management's role is in developing a safety culture.

The culture of an organization is largely defined by spoken and unspoken words. Organizations with cultures that are not focused on safety always have the ability to change. It's never too late to begin the transformation. So let's take a quick look at what it takes to make that happen.

When you look at organizations that have

strong safety cultures in place and excel in safety performance, you find that they have most of these traits in common.

Supervisors use the six skills of leadership that are positive recognition, constructive feedback, public scorekeeping systems, team building, setting of tolerance levels, and a supervisor as a leader or mentor.

Management is accountable to its employees. And the employees are accountable to each other for their own safety.

Total safety culture also includes having a system for suggesting continuous improvements with rewards for those employees and a way to track them.

Organizations with strong safety cultures proactively look for hazards before they lead to incidents. Operational decision factors factor in the safety and environmental risks as part of the process of the decision-making.

Supervisors are investigating unsafe acts and near misses and develop corrective action as to prevent reoccurrence. This builds accountability and trust.

Many risk assessment tools are available today. And organizations with strong safety

cultures use these tools to identify high-risk tasks and develop mitigations to lower those risks.

Management should place a very high value on the use of stop work authority and constantly reinforce this value. And, ideally, employees are recognized every time they stop an unsafe task from happening.

Behavior-based safety processes are also a strong key factor. And they can actually cause a person to eliminate their own at-risk behaviors.

So what prevents companies from implementing and achieving a total safety culture?

Some of the barriers that we face are -- that are proactive approach to safety is very difficult to maintain, especially in a complex environment that we work in these days where the demands are evermore. And a lot of times people are dealing with, you know, crises after crises. But there's no finish line in safety. It's an everyday process.

Employees can tell when management says that they want to change but they don't support that change effort with the necessary resources. In other words, they don't walk their own safety talk.

For time pressures, a lot of times internal

and external time pressures are a barrier because -- an example of an internal time pressure, for instance, would be a crew that wants to achieve a down hole bonus for reaching TD early.

External time pressures are communicated a little more directly when a customer might say, If you don't finish this well by "x" date, then we'll find another contractor who will.

If employees don't feel empowered to stop any unsafe task, then they're not going to be able to take responsibility for their own safety and the safety of the people they work with.

Organizations have to be willing to walk away if they can't resolve a safety problem with a customer.

Risk perception is another key barrier. We usually get away with risky behavior which reinforces our perception that the risk is low.

Hazards that we can explain and control cause much less alarm than hazards that are not understood and, as a result, are perceived as uncontrollable.

Some organizations have implemented so many different safety programs over the years that employees don't see the transformation to a total

safety culture as credible. It's perceived as another flavor of the month.

So what's management's role in all this?

Well, first, we need to distinguish that there is a difference between management and leadership. Management holds people accountable for getting things done, and leadership inspires people to want to do something. If there's lack of trust, it can restrict the development of belonging and teamwork and prevent people from taking personal responsibility for safety.

So effective leaders can and should help people accept change and inspire them to participate in the change process. Leaders look for people in the organization who show interest and commitment, and that's where they focus their attention.

Leaders give these people the training and skills that they need. And those people, in turn, have a positive influence on the rest of the workforce.

But there's always people that want to resist change; some passively, some actively.

Passive resisters, they perceive change as a problem. They grumble and complain a lot. They're critical when something new is forced on

them. But they usually get on board once they see that the majority of the people participate in the new process.

Active resisters, they view change as a threat, sometimes to their own personal control.

Unfortunately, it doesn't take many of them to slow down the change process.

One way that resisters show their resistance is to not participate in the change. The best way to deal with nonparticipation in the change process is to set up situations that allow peers to influence the nonparticipators. This is one of the building blocks of a behavior-based safety approach.

One thing is for certain, though, that nothing changes if nothing changes. And the offshore drilling industry has improved operational safety by tremendous margins in the last two to three decades.

Are we where we need to be yet? Almost. However, there's no finish line in safety, and we can't rest on the laurels of our past accomplishments.

There's no doubt that the leadership of the offshore drilling industry will continue to make great strides in continuously improving the safety

of our operations.

Once again, I would like to thank you for inviting me to speak today.

DIRECTOR BROMWICH: Thank you very much. We appreciate it.

Earl.

EARL PIERMATTEI: Thank you very much.

I guess I'm surprised to be invited to speak at this forum, but I hope I don't have to come back ten years from now.

My name's Earl Piermattei, and I have been designing offshore platforms, both exploration and production, for about 35 years and -- in different parts of the world.

And I would say the Bureau is at a minimum 20 years late in creation, maybe a hundred. And the safety problem is one of engineering design synthesis.

It's -- the engineering community doesn't have the research, the metrics to consciously create a totally safe system. And you could look at other industries, like the car industry with its crash dummies, aircraft industry -- there's much more attention at the initial design phase.

And so this part means that the offshore

safety of personnel, environment, and assets requires sponsored long-term research. I have been an adjunct professor at the University of Western Australia, School of Oil and Gas Engineering, now a part of the Mechanical Design Department, and I've seen the benefits of this research. And it's very difficult for the industry to actually do this.

A, the engineering companies find it difficult to actually know how to work with an academic institution. They also don't have the funding to do this nor the training. But at these universities -- or even an institute organized for safety and design, we could reduce all the events that cause injury and harm.

I've seen at the school researchers, with the support of government, experiment with studies on worker motions on drill floors, and things like this, so that the workers are actually not injured in a long enduring way.

So an academic part, an academic foundation gets rid of lip service. It builds into the design process how a system can be evaluated.

Today the engineer gets a product data sheet and it might be some epoxy or something and it tells him not to swallow it.

There's so much information not existing to the designer at the point of creation of the machine or the platform.

If you were to go to Norway, Statoil would have a process plan and your mouse arrow would point at a pump and up would come a list of all the pumps they've owned of near that type, mean time between failures, an extraordinary amount of information is given to the designer to select the right machine, but there's nothing on safety.

So what's happening here in our information design-type industry, which is used in advanced plant design, is key safety metrics are missing. And this needs to be studied as to how to produce the right information.

Now, this would be helpful to terrestrial industries, actually.

So -- and the next step would be to create a multidiscipline effort between human resources and engineering at this creation phase to define the jobs correctly and the tasks.

These are all missing. The engineers just assume that it will be like a NASA group showing up. And when you see these facilities today in a rapid rate of technological change around the world for

the use of the ocean -- not just in energy. I've worked on ocean mine designs in Tonga, New Guinea, 2,000 meters down.

And you have all the academic and research organizations in Venice, developing systems to make that work. They have knowledge, and there's an awful lot of information. But safety is just not at the top of the list.

And, of course, there's the practical things that are mentioned, like adopt a platform, safety case approach from the U.K. But we need to do a lot more than that.

And, yes, America's a bit anti-intellectual sometimes, but we have great institutions. And I was pleased to be in a forum and a class at MIT, Offshore Engineering, 1985, and listened to the laments of the faculty as how this program was ending because there's no research funding.

Now, the solution was obvious, and that's the Sea Grant College Program. But that program does very little for the offshore industry, funnily enough.

And so I come today with what will the Bureau establish? Will its leadership role really focus on safety for the long-term? And will that

create a knowledge base for engineers to quantify the design safety case? That should be a product of the design as much as how much oil it produces a day, et cetera. And that will require educating the engineers.

And California, we know you want a structural engineer for earthquake design. So this research will lead to a body of knowledge that engineers can use on their projects and designs that will grow with the technological change so we have safe workplaces, like I said, for just ordinary physical wearing out or injuries, let alone fatal events. I don't like the word "accidents."

Now, of course the public must realize the engineering community is deeply affected by what has happened, but the safety on the rigs is dire. It has been. We've let it go for years mainly because we're not educated to deal with the issue.

Now, where there were events as simple as a crane falling over the side in Africa, killing a tower pusher with seven children, we went and worked that to death. It didn't happen again, not on the rigs we were involved with.

But that's not what is needed. It's a long-term program. There's very little to do. The

funding system is in place. It's the direction from this Bureau that has finally got the authority to create the safe culture. And it has to start at the point of concept.

I thank you very much.

DIRECTOR BROMWICH: Thank you very much.

JJ.

JJ SOS: I hope I'm not breaking any protocols here, but I don't speak very well sitting down. So Secretary Bromwich, I appreciate the opportunity to speak today.

My name is JJ Sos. I spent 22 years as a fighter pilot in the U.S. military. And for the last three years I've worked in the offshore oil industry with a company called Check 6.

And what do we do at Check 6? It's a group of select fighter pilots, Navy SEALs, couple astronauts, and we take tools and techniques, best practices from commercial aviation, military aviation, space operations, nuclear power, and teach and apply them in an industry that is, quite frankly, remarkably similar to the cultures and the environments we grew up in.

And what I would like to speak about today a little bit is a little bit of background of why

these things apply, talk about some current limitations we see as outsiders to this industry with the safety and environmental management systems, and then propose some solutions going forward about things that were discussed by the secretary earlier.

Cultural change, safety management standardization, and also some training deficiencies that we see.

Okay. So a big question probably is, what do drilling rigs and aircraft carriers have in common? And, in fact, they have quite a bit in common.

First of all, you have a remarkable technology. You have this really incredibly engineered stuff, incredibly expensive equipment that's pushing the limits of human performance and human behavior. Okay.

In fact, the missile guidance systems on some of our fighter jets are very similar to the guidance systems used in directional drilling equipment offshore. Same technology.

The drill line in the derrick of that deepwater drilling rig is the same cable that lays across the flight deck of the carrier that stops

airplanes. Okay.

The people are the same. Sixth grade education, all the way up to a Ph.D. And the job you have isn't necessarily tied to your education level.

Okay. They even smell the same. They smell like diesel fuel, and there's the constant hum of motors. Okay.

But what is different? The Navy has a training problem. You see you can't put a person on an aircraft carrier and keep them there for 20 years. So every three years, 100 percent of that crew changes out. And because of that, they had to develop a culture and a system of cross-checks, protocols, standards that the system moves forward regardless of who's put in position, whether it's a leadership role or a basic operational execution role.

The system checklists and training take the place of experience, because everybody out there is no more than three years experienced in their job. And that -- those concepts are some of the things that, you know, kind of answer some questions going forward, we believe, for this industry.

One part of the Navy has an incredible

safety record. You see, the drilling rigs and the aircraft carriers, there's still incidents and accidents. But when you look at the U.S. Navy nuclear power program established in 1945, in 65 years, dealing with some of the most hazardous material on earth, they've never had an accident. They've never had an accident. 65 years.

Compare that to the former Soviet, now Russian nuclear Navy, and they've had dozens of major accidents and at least 507 people killed dealing with exactly the same technology.

Okay. So what's the difference? It's standards in training. When Admiral Hyman Rickover established the Navy nuclear power program, he knew that if there was an incident or an accident, the program would be finished.

So from that day forward, the training, the selection, the training, the measures of competency of the people that handled that material for the U.S. Navy was exceptionally high.

And this -- and it's a mindset that we can have incident-free operations. It's a mindset that that is an option and it works. It works in one of the most hazardous environments in the world.

All right. So what do we see currently

going on offshore? Again, we're outsiders; didn't grow up in this industry.

First of all, there's a lot of good intentions, a lot of good safety programs out there. But they tend to be very cumbersome, especially for the operators that work them in the field. And there's, quite honestly, too many.

Every contractor, every third-party contractor, most operators have a system. It's called something else. They all have different names. Again, they're all based on really good intentions, lessons learned, best practices, but fundamentally there's too many of them, and it really causes confusion in the field.

In fact, on the North Slope of Alaska, they use 12 different permits just to transfer fluids between drilling rigs and trucks. 12 different permits, you know.

And you can see where that's just now -- from that comes this mindset that all this -- safety management systems are basically an exercise in paperwork and not really seen as a tool that can be utilized to enhance safety. It's kind of seen as an administrative burden. We got to sign off, get our check in the block so if something goes wrong,

somebody gets hurt, at least we can say our paperwork was correct.

And also because of that there's a pretty high training overhead. You constantly -- you know, as you move rigs from one place to another, as you move personnel from one place to another, they constantly need to be retrained on what's the safety system that we're using today.

So you translate now the paperwork and the administrative piece into execution, and offshore and, quite honestly, onshore what we do see because of this, there's a lot of assumptions and there's not a culture of debriefing.

What's ironic, API RP 75 and then the SEMS proposed -- the proposed ruling that's out there on the books, everybody talks about sharing best practices. They all talk about lessons learned.

Every contractor, every operator safety management system we've evaluated has some sort of concept of best practices and sharing lessons learned, but it's poorly executed because it's not well understood.

And here are the assumptions we see. Number 1, there's assumptions that meaningful planning has occurred. Not planning to a standard;

you know, we would see it at top gun.

Effective communication is occurring. And we'll have an example of that here shortly. Okay.

Another assumption that when I as a regulator or I as an operator or I as a contractor, you know, tell somebody what we want to have happened, that this was effectively communicated.

And then that -- you know, the last assumption is that people will react properly under duress.

Without, you know, a change and approach to how we train and evaluate people, we really don't know how they're going to react under duress until they're placed in a real-world emergency situation.

And those of us who flew airplanes for a living, you know, find this a concern, you know, that we find out how well somebody's going to perform under pressure when it's a real-world life or death situation potentially.

Because these high-hazard operations -- and they're not high risk. They're high hazard. There's lots of hazards out there, but the risk is incredibly low. The industry in general is remarkably safe. Considering what they do and where they do it, it's done remarkably safely.

But still, in order to get to that next level, in order to truly get to incident-free operations, couple things are going to have to occur.

There's some discipline in standardization in the approach to operations. Basic checklists, procedures, protocols, like cockpit call-outs that the airlines use as they're coming in to land, you know. Those basic call-outs, protocols, and procedures. That type of discipline and standardization applies in these operations.

Then, as we're out there executing, we have our plan, and we're in there executing, three concepts we always talk about are cross-checks, mutual support, and oversight.

Cross-checks is the paperwork we do to ensure we've thought of everything before we do the job. Okay. All these different programs, stop permit to work, lockout tag-out, de-energizing the correct pumps, all of these things.

Mutual support is that wingman concept. Who is backing me up? Who is checking my 6? as we would say.

And then oversight is our leaders. And we've had that discussion; the other panelists

brought this up. Are leaders leading, or are they mired in executing paperwork?

All these things apply in these high-hazard operations. There's a structure to this and it's a culture we were raised in flying and we call it plan-based execution.

And every job starts with an objective. What are we trying to do? Trying to drill a 30,000-foot subsalt well or trying to safely get from the rig floor to the smoke shack.

From that we come up with our plan, a standardized format to the plan. Everybody -- when we say plan, everybody in the organization understands what that is. Then we'll go out and brief that plan to our team.

After that we go out and execute using the tools and techniques we talked about, cross-checks, mutual support, and oversight. And then this is where most organizations stop. What do you do after that?

Go on and go to the next job. When do we talk about jobs? We talk about jobs if something goes wrong or if somebody got hurt. Okay.

But that debrief culture, it's -- what this really is is a model for continuous improvement. If

we, even three to five minutes, at the end of each job talk about what worked, what didn't, share those lessons learned, how to improve that plan the next time, we can rapidly improve and, you know -- and minimize the potential for human error going forward.

And, you know, some people say, Well, this -- this type of model, this system works very good for fighter pilots, but how does it work in the oil field?

Well, No. 1, it gets structured around the safety management system. Again, it's all -- most of them are in there, that you have this process and protocol. It's just poorly understood or poorly executed.

And here's an example of, you know, a hand offshore that retrained, culture change, able to -- you know, to think about things in a logical format.

Again, what's the objective? What are the resources? What are my steps? Do my risk assessment, and then afterwards I'm going to do an after-action review, debrief the job.

Now, quick note on this photo. This was a rig where, through good intentions and good acts, they ended up getting stuck, which means they

couldn't get the drill pipe out of the ground.

And what happened is the subsea engineer changed blowout preventer control panels because there was a leak in one of the blowout preventer control panels, but he didn't tell anybody. It wasn't communicated. Good intentions. Five days and $25 million later they figured out what was wrong.

And it's just basic systems, basic protocols, basic culture to overcome that. Now, the fortunate aspect is nobody got hurt in all of this, you know. But fundamentally, a lot of good intentions, and it's really a training problem.

So what do we see as the solution moving forward for industry?

Number 1, more of a standard than just the SEMS proposed ruling. Basically a standardized safety management system. So as we go from rig to rig -- and "we," I mean the industry. When, you know, hands, third-party hands, when employees move from company to company, there's a common system. It's user friendly, you know. Big -- big picture -- lots of pictures and big print. Okay. Simple, easy to understand.

It's automated. Okay. There's no --

there's so much paperwork flying around these rigs that you lose the intent of the programs because there's so much paperwork.

We're not planning. We're filling out paperwork. It's a very simple process to standardize it and make it automated and user friendly.

Then we move to the training piece, the competency. From a pilot's perspective, despite, you know, all these standards that are out there, there's -- there's poorly defined measures of standards of performance currently for well control, for crane operations.

They're not -- you go to well control school -- we've had people go to well control school for operators and contractors. And, again, they're good programs, they're well intended, but there's really no specific measures of competency which could easily be implemented. And those can all, by the way, be linked back to these safety management systems.

And the last part is the big piece, if we're going to have standards, we have to train to those standards. And training to those standards, again, there are systems out there from commercial,

military, aviation, from, you know, nuclear power programs, simulation automation systems that are cheap, deployable, and track all these things and can roll it all back into a safety management system.

Perfect example is the current system being used to train pilots for the new Joint Strike Fighter, the F-35. Instead of a stack of books and a whole bunch of paperwork, it's a laptop, two peripherals, little throttle, little stick, 3-D virtual reality glasses.

Deployable. All the training is delivered in a format that is easily understood by digital natives, as they're called, the kids that grew up today with video games and computers. And it all can be remotely linked.

So you could literally have a crane operator on a rig in Nigeria do some basic refresher training and all that information be linked back to Houston, where it can be assessed, measured, and evaluated.

So the bottom line is there's best practices, tools, and techniques out there that will improve safety and execution in the field. It's not -- it's a training problem.

That's what I have.

DIRECTOR BROMWICH: Okay. Thanks very much.

Let's spend a few minutes asking questions of our panelists. Let me begin.

Brenda, thanks very much for your presentation on the WellCAP system and the WellCAP requirements.

Can you give me -- can you give us a little bit of background as to how the WellCAP program got started, what was the impetus behind it? And my second question is: What's the process by which the requirements are supplemented and modified over time in response to experiences in the field?

BRENDA KELLY: I -- as I understand, the well control training actually began in conjunction with the U.S. Geological Survey in the '70s when they were the regulatory body. Industry members developed -- developed a training standard. At that point it was a U.S.-based training standard.

By the 1990s, though, there was a desire within the IADC, within -- among our members to have an international standard where there would be consistency from one location to another, where -- where they could be assured there was, in a sense,

some harmonization. If they were moving from one country to another, there would be acceptance of their training records, the level of training of their personnel.

So it was in the 19- -- around 1995 that the WellCAP program developed as an international standard with input from regulatory bodies around the world, as well as our IADC members.

Now, in going forward from there, the -- because of multiple things in place currently, because of the ISO certification that the accreditation department has in administering the programs, because of the level of involvement of IADC members through technical committees, there's just a -- there is an international network, so to speak, by which there can be, and often is, immediate feedback following an incident.

This needs to be -- something has happened in Norway; this needs to be taken into -- at least looked at by the WellCAP -- the Well Control Committee has a Curriculum Subcommittee. So there will be a member suggestion or recommendation that this be looked at.

We had an example, in fact, coming from -- from Maersk in -- operating in the North Sea, having

some questions about the deepwater well control guidelines. And they requested that the committee look at these current well control guidelines to see if there needs to be an update or -- a review and update and any considerations for training.

So it's taken back to committee. And these -- as I said, these committees are on -- are standing committees so that they are available to look at things immediately.

We -- I think because of this structure, we feel that we are in a position to respond very quickly.

Then to the accreditation piece, to taking it to training, once a decision is made, the network is there to communicate to existing training providers. And those companies accredited currently have six months to implement any time there is a change in standard unless there's some urgency that it needs to be implemented now. But there is a process by which this change, any change in the training permeates the entire system worldwide.

DIRECTOR BROMWICH: One of my concerns is that standards and requirements don't change unless there's a horrible accident.

Do you have a process in place where there

is continuous feedback so that people who learn things on rigs and in the industry that don't eventuate in serious accidents nevertheless get fed back and lead to a process of improvement and change?

BRENDA KELLY: Yes. And that is very much ongoing right now.

The Curriculum Committee, as I said, is a standing body. They are routinely looking at revisiting individual curriculums. Currently, the drilling curriculum, the work-over completion curriculum is being reviewed.

And the Well Service Committee, which is a separate body, but provides feedback and input into the well control curriculum, is providing input into the well service -- well service-related curriculums.

So this is an ongoing basis. Changes are made without incident being the driving force.

The development of the deepwater guideline -- well control guidelines is an example. As soon as those guidelines were developed, the items from those guidelines were immediately implemented into the WellCAP curriculum and went forward to the international arena.

DIRECTOR BROMWICH: Great. Thank you.

Ellen.

ELLEN ARONSON: Yeah, thank you. I'm interested in talking about a little bit about the -- how safety culture is really managed within an organization.

And one of the things that we talked about, JJ talked a little bit about the continuous improvement and this feedback loop.

And, Dan, you talked about the employee empowerment.

And one of the questions that I have is: Exactly how does that employee empowerment work? How does that message go out to the employees, and how is that message supported through the life cycle?

DAN GREMAUD: Right.

The way we've implemented it at Nabors is that our top management has promoted the use of the stop work authority whereby any employee has the backing from the president on down to stop any task that they think is unsafe. And there has never been any kind of recrimination against the employee for doing that.

Where we find the biggest challenge is,

though, is with our customers. Obviously, any time work stops, you know, there's a money factor involved.

And when we say stop work authority, part of our training to our employees means you can stop a task for, you know, ten seconds to remind an employee to put on his safety glasses. Or you could, you know, stop a whole job, if you needed to, if you had safety concerns that need to be brought up.

But like I said, the real conflict sometimes is with customers. And we've actually had our managers tell our crews to rig down and get off location because of safety conflicts that can't be resolved, you know. A customer wants us to do something that we know isn't a safe way to do that task. And so the top management support is really kind of the key with that.

ELLEN ARONSON: Thank you.

BILL HAUSER: Ms. Kelly, one of the things we've heard, talking about WellCAP and other training programs, provide the training to employees and those working out there.

Does WellCAP provide a tool to the people that use it to measure competency? Training versus

competency? What -- how do we take care of that?

BRENDA KELLY: There is definitely a distinct difference between training and competence, no doubt.

When the WellCAP program was designed, there was a conscious effort to look at not only knowledge, which generally is what's communicated through training, but also to identify key skills that an individual would need to possess to be able to perform their job on the rig.

And so the WellCAP curriculum for each of the programs specify knowledge and the key skills.

With that said, though, I will say that there is still another step needed, and that is you've -- you've received this knowledge. You understand. You have had opportunity to demonstrate through simulation, through practical exercises, even with a live well scenario in a training site. There still is the question, can you do your job correctly, appropriately on site, on the rig?

This is where, in part, the Subpart O addresses. And that had been a responsibility of the government to actually go on site and evaluate personnel on the rigs. That has happened to an extent, but I think minimally has it -- has

happened.

And I think as a result of that -- and, two, I want to keep -- everyone to keep in mind that our desire is very much to keep our workers safe. We don't want accidents. We don't want the failures. We don't want the environmental damage. And so there is strong motivation among our members to do appropriately.

And so there is very much for us this looking at the idea of competence. The discussions are already underway through our Well Control Committee of how to take that next step to assure that the individuals on the rig are actually competent.

So there are -- there are multiple resources, just as one of our speakers referenced, some of the resources that his company provides. There are multiple resources. And so we are currently discussing how to take that next step.

I think it's -- some of our accredited providers are already taking the next step in developing their own programs. But as -- as an organization, we are looking at how can we develop something that will have some consistent application for all our members. So we are looking at that now.

BILL HAUSER: Thank you.

Do you know how many -- or what percentage of operators in the Gulf of Mexico use WellCAP as their well control training program?

BRENDA KELLY: I believe all.

BILL HAUSER: Okay.

BRENDA KELLY: I believe it's all.

DIRECTOR BROMWICH: Dan, I have a question for you. I found your presentation, your comments on building a safety culture to be very interesting.

One question I have is whether and in what ways you use personnel evaluation on safety metrics. That is, to what extent do you use safety as a specific basis for evaluating personnel and determining salary, promotions, so forth?

I found that only if you included something in personnel evaluation do you have a higher measure of certainty that, in fact, it's going to be taken seriously.

So how that's -- how is that incorporated in the model that you described?

DAN GREMAUD: Well, that is an important part of it.

At Nabors every employee's evaluated every year by their supervisor. And one of the components

of that evaluation is their safety performance. And it's not a punitive system where they get dinged for, you know, if they've been injured or anything. But it looks at the components that we are interested in, like their participation in our various safety programs; you know, what their role is as a leader or influencer for the other people on the crew; what's their level of support for our safety program?

So they're measured on that -- or evaluated on that every year.

DIRECTOR BROMWICH: The other question I have for you is you talked about different kinds of resistance to a safety culture. And I think you classified them as passive resisters and active resisters. And you described steps that can be taken to try to bring those resisters of various kinds along.

But I assume there are some cases that they can't. And so in that case, what do you do? People who don't take safety seriously enough for you and your colleagues to feel comfortable with them.

DAN GREMAUD: Yeah. Eventually what we find is that the people that are strong resisters to safety, eventually the safety program kind of

surpasses them, and they kind of get left behind.

And eventually they get weeded out of the company because after a certain amount of time of nonparticipation, our managers have to start disciplining them. And that will either cause one of two reactions, right? They'll either get on board or things will continue to deteriorate until they've decided to leave or we ask them to leave.

DIRECTOR BROMWICH: Okay. Anybody else have any questions for Dan before we move on to Earl?

BILL HAUSER: I've got one question. We are going to be issuing a final rule that will incorporate the SEMS program.

What more as a regulator can we do to work on safety culture?

DAN GREMAUD: As a regulator? I think your programs like SEMP and SEMS actually go a long way to building a safety culture.

As most of us up here have said today, I think the key is to have the leadership of the organizations continually work on building their safety cultures. Let's face it; every company has a safety culture. It's to what degree that it performs.

And so to continually build on that safety culture. And as a regulator, I think that the way that you standardize the rules for all the operators is probably one of the biggest benefits to do that.

BILL HAUSER: Thank you.

DIRECTOR BROMWICH: Earl, thank you very much for your comments, your candid comments about what you see lacking in the regulatory structure that currently exists.

One of the comments that I was particularly interested in is your noting that in your view, key safety metrics are missing.

Can you elaborate on what you mean by that? What kinds of metrics are you referring to?

EARL PIERMATTEI: It's the experience of the products you're using to know the history.

In other words, if there's been a lot of accidents with some type of equipment, that's unknown to the engineer when he's reviewing the type of equipment to incorporate. Or the process of construction, you know, some kind of foundation drilling equipment, et cetera.

So there's -- I mean, as you know, in most of the legal systems, a lot of this information is locked up by the court. I've never really

understood that. You know, your car, you know the safety records. It's public.

So I think a lot of the equipment and processes that engineers use regularly, they have no feedback. It never is considered. It's what is most efficient. What is the appropriate strength? All these other metrics of engineering don't have the safety input.

DIRECTOR BROMWICH: Because there's not a comprehensive tracking of what happens?

EARL PIERMATTEI: Yes. It's not obvious.

You know, in the case of blowout, there are engineers who have designed systems for the well above the blowout preventer -- there are two wells -- where they process the well stream fluid out of the riser. That's for a working BOP.

And so engineers are always innovating to actually eliminate the hazard. So that's the kind of thinking that's to be promoted. Eliminate the hazard. That's -- that's the essence of the design synthesis.

And there are conferences -- engineers have talked openly about these issues to the industry. But -- and same with the BOP designers. They have fantastic ideas on how to change to eliminate

hazard. And that's where they have to find a place to go, because they're not in a position to fund all of this innovation and change.

And that's where the idea of a safety group with a lot of -- how can I put it? -- boundless vision could eliminate the risk to the facility in total.

DIRECTOR BROMWICH: We need to combine the boundless vision with the boundless resources, and then we'll be cooking.

EARL PIERMATTEI: Well, that's -- you must realize, in the deep ocean there's a lot of progress being made internationally. The fact that we are not participating in the law of the sea doesn't mean it isn't going on.

And so this could include international participation. And you would find a lot of interest, I believe, from the deepwater countries.

DIRECTOR BROMWICH: Thanks very much.

Ellen and Bill, do you have any questions for Earl?

ELLEN ARONSON: No. Thank you very much.

BILL HAUSER: One quick question.

How do you see us taking this opportunity? How do we best move forward with your idea?

EARL PIERMATTEI: Don't be afraid to fail. Try many things. And if it's not working, stop it. And try and get the engineering community, the operators to participate.

I mean, this is the Australian standard for risk management, 28 pages in its entirety; applies to all of its industries. I have seen it implemented by Shell and Chevron in Australia. It's a remarkable process. They would do it here. I'm sure they are doing it. So -- but it requires the rest of industry to do it. They can't do it all.

And the engineers have to be trained and educated in the process. And so that's not easy today.

DIRECTOR BROMWICH: Thanks very much.

JJ, I have one question for you.

You talked about there being a limited debrief culture, that there is, if not an absence, a shortage of trying to collect best practices and lessons learned on a going-forward basis.

And I agree with that. I've seen that in organizations I've worked with. There's a failure to take advantage of experienced employees or people who go through various kinds of incidents to gather that intelligence so that people who are still doing

that kind of work can profit from it in the future.

In your experience, what institutional changes need to be made in order to enhance that kind of a debrief culture so that lessons learned and best practices are, in fact, collected, passed on, and absorbed?

JJ SOS: It takes a couple things.

Number 1, the leadership has to commit to that culture and give the time to hold these debriefs. And they don't take a lot of time, but once you start doing them, you know, when the contractor says, We're going to do them, it's in our safety management system, and the operator allows it to happen --

One anecdotal example is we were working with a rig in North Dakota, and it took them 20 hours to trip out of the hole. They debriefed for 20 minutes. The next day it took 12 hours. So they saved 8 hours of operating time by having a 20-minute debrief.

And so No. 1 is giving them the opportunity and seeing the benefit. Once that starts taking hold, it becomes self-sustaining. It also works on the leadership piece and the communication piece because now I'm soliciting input from my

subordinates if I have this debrief, this after-action review, and they feel empowered and they learn more and we're sharing these best practices.

But you can do all the talking you want. Unless there's a relatively simple, automated process to share these things, the -- while there's a tremendous benefit to the people doing that debrief at that time, you start losing the transportability of those lessons learned.

And, you know, for example, a contractor we've worked with had all their JSAs, their job safety assessments, in Excel spreadsheets. And they're cumbersome and hard to find and hard to update.

When all that information got moved to a database, it now became very easy to update and share these lessons learned. And so, you know, I think we figured out it's saving them about 2500 hours per rig in time just not messing with Excel. And these lessons learned are rapidly being shared and disseminated and safety improves and performance improves.

DIRECTOR BROMWICH: Great.

We're running a little late, but, Ellen or

Bill, do you have any final questions for JJ before we --

BILL HAUSER: One quick question.

On RP 75, does it adequately cover lessons learned?

DIRECTOR BROMWICH: Can you explain what RP 75, Bill, is for people who don't know?

BILL HAUSER: API RP 75 is the safety management system that the agency is going to incorporate into the regulations -- plans to incorporate.

JJ SOS: Conceptually, yes. The hard part is taking the concept and making it -- having it executed in the field.

As we say, you know, most of these safety management systems, they all have tremendously good intentions and tremendously good, you know, background, both behavioral science engineering and everything else. The concepts are there, but it's the execution in the field.

If the system isn't set up to support those behaviors, if the leadership doesn't support those behaviors, then it doesn't matter what the book says you're supposed to do. It's -- it's not going to happen.

DIRECTOR BROMWICH: That is true everywhere. Absolutely.

Thank you very much. We really appreciate the presentations you've given this morning. Thanks very much.

We'll bring on our second panel right away without a break. Thank you.

(Audience applause.)

DIRECTOR BROMWICH: Good morning, again. Let's move ahead with our second panel. Let me introduce the panel members, and then I'll turn it over to them to make their presentations. And the format will be the same. We'll allow each of them to go forward with their presentations, and then Bill, Ellen, and I will ask questions of each of the presenters.

Our first panelist immediately closest to me is Linda Krop, who is the chief counsel of the Environmental Defense Center.

Next to Linda is Keith Wenal, who is the health and environmental safety manager for Venoco, Inc.

Next to Keith is Rob Hurley, who is principal consultant with Hurley Environmental Safety Management Company.

And, finally, to Rob's left is Mark Steinhilber, who is senior process safety engineer and supervisor with the Mineral Resources Management Division of the California State Lands Commission.

Thank all four of you for being here, and we look forward to your presentations.

And let's start with Linda Krop.

LINDA KROP: Thank you very much and good morning.

I want to first thank you for allowing me the opportunity to address this forum today and provide a local perspective on this very important topic.

And we also will take this opportunity to invite you to come back to Santa Barbara in the future, and we can have a dialogue perhaps about some of the issues facing our region.

I am Linda Krop, Chief Counsel of the Environmental Defense Center. We are a public interest environmental law firm headquartered in Santa Barbara, and we represent and partner with dozens of community and environmental organizations concerned about the risks and impacts caused by offshore oil and gas development and who are dedicated to the promotion of clean energy

strategies and technologies.

We have a long history with offshore oil production. What many people do not realize is that Santa Barbara County was the site of the first offshore drilling in the country, which occurred offshore somewhere in the late 1890s. We currently have 20 platforms operating in the Channel, producing oil and gas from approximately 40 leases.

The Santa Barbara Channel is also home to the Channel Islands National Park, National Marine Sanctuary, and Santa Barbara Federal Ecological Preserve. This area is one of the most important bioregions on the planet and boasts the highest biodiversity in the Mainland United States.

Placing oil drilling in the midst of this incredible environment creates unacceptable risks and impacts.

In 1969, shortly after the first offshore oil platform was installed, a blowout occurred at Platform A. This blowout became known as the spill that was heard around the world and led to the adoption of a National Environmental Policy Act or NEPA in 1970.

The intent of NEPA was to analyze potential environmental consequences before they happened and

to help agencies identify the means to avoid unacceptable risks.

Unfortunately, despite the implementation of NEPA and a host of other environmental protection laws, accidents continue to happen. The 1969 blowout occurred because drilling equipment failed, operators followed faulty judgment, and regulatory oversight was inadequate.

These same factors combined to cause the Deepwater Horizon blowout in April, 41 years later.

The main point of my testimony today is to point out that oil drilling will always pose risks to human safety, health, and the environment.

And there are three reasons for this fact: First, technology changes more rapidly than the regulatory agencies can respond. New technologies operating in new environments pose unknown risks. Regulations cannot keep pace with or anticipate new dangers and new risks.

Unfortunately, safety environmental regulations are often implemented after a major disaster or accident.

Second, the human factor is unavoidable. According to an analysis by the Minerals Management Service addressing accidents from 2001 to 2007,

there were 1,443 incidents involving 41 fatalities and 302 injuries. And this, of course, was before the Deepwater Horizon blowout.

Six factors contributed to these incidents, including: (1) a lack of communication between the operator and the contractor; (2) a lack of job hazard analysis or written procedures; (3) an on-site supervisor failed to enforce existing procedures or practices; (4) lack of written safe work procedural guidelines; (5) failure to maintain facilities and equipment according to recommended practices; and (6) workplace hazards were not identified or corrected.

Notably, only 25 of the 1,443 incidents were caused by the failure of a safety device.

What this report shows us is that it is virtually impossible to prevent a serious accident. Upgrades in equipment and technology are not enough.

We also witnessed this firsthand here in 1997 when a leak developed in a state of the art pipeline delivering oil from Platform Irene to shore near Point Arguello.

The leak detection and automatic shutdown system worked perfectly. The pipeline shut down. However, a worker on the platform noticed the

pipeline had shut down and manually restarted it, resulting in a major oil spill that affected about 40 miles of pristine coastline in California.

Third, equipment is not infallible. The 1969 Platform A blowout was caused by an inadequate well casing. The Deepwater Horizon blowout may have been caused in part due to faulty equipment in the blowout preventer.

Embarking in new drilling areas such as deepwater drilling or, as in our area, utilizing older equipment is a time bomb waiting to happen.

In sum, our message today is that accidents will continue to occur regardless of the effects of BOEM and other agencies. We appreciate the fact that the Bureau responded to the 2007 incident report by recommending new safety measures, and we support those measures, and that the agency is proposing additional changes and reform following the Deepwater Horizon tragedy.

New risks in human factors, however, will continue to plague this industry. Deepwater drilling, of course, exasperates these risks and the consequences of such accidents.

My final point is that we also need to look at the environmental as well as human consequences

of oil spills themselves. Not only is it impossible to prevent an oil spill, but we still can't effectively clean one up. In fact, only about 15 percent of an oil spill is typically recovered.

In recognition of this fact, the California Coastal Commission in 2005 objected to the renewal of 36 federal bases off of our coast, stating, quote, Current state of the art response measures cannot effectively protect California's shoreline and coastal resources from significant oil spill impacts, end quote.

But we need to look beyond just the environmental consequences of a spill and also look at human health and safety.

In the book "Sound Truth and Corporate Myth$," Dr. Riki Ott documented the many human health effects caused by oil spill response and cleanup activities, including permanent respiratory and neurological damage and even eventual death.

We support Congresswoman Capps's effort to monitor the health effects that may be suffered now by the cleanup workers in the Gulf of Mexico.

It is tragic and deplorable that 11 workers lost their lives when the Deepwater Horizon blew up. As with the Valdez spill, however, we won't know the

true impacts of the blowout on human health and safety for years and decades to come.

So where do we go from here? First, prevention. We need an end to new oil leasing, and we need to phase out existing production. We urge the administration to support Senate Bill 3358, the West Coast Ocean Protection Act, sponsored by all six West Coast senators.

Second, we need to make existing development safer. We need more than cosmetic and organizational changes. We need real policy that reduces the risks of offshore oil drilling. Because of the inherent dangers and risks, we request more inspections, more third-party monitoring and reporting, and more regulatory oversight.

I would also like to take this opportunity to plug our request that the Bureau reopen the Santa Maria oil platform inspection office off of our coast.

Third, we need to transition to clean energy future. And I think one thing that's gotten lost in this debate following Deepwater Horizon is the fact that last year Minerals Management Service, now the Bureau, was focusing extensively on offshore renewable energy and clean energy strategies and

technologies. And so we do encourage, even in the midst of this very important effort, that the Bureau continue to prioritize its focus on renewable energy planning and analysis.

We need to switch our energy reliance from fossil fuels to energy efficiency and renewable energy.

This transition will protect human safety and the environment, reduce climate change, provide jobs and stimulate the economy, and improve our national security.

Thank you for your time and consideration.

DIRECTOR BROMWICH: Thank you very much. Appreciate it.

Keith.

KEITH WENAL: Good morning, and thank you for allowing Venoco to participate in this important discussion.

A number of years ago Venoco determined that we wanted to do something better than what was the standard requirements. We all wanted to make sure we performed the standard requirements to the best of our abilities and then do something more than that outside of the box and what those requirements typically required us to do.

So we developed what's called our incident prevention plan. The CEO determined that his directive was that HES performance would need to be on the top of our minds at all times. He wanted to make sure it was expressed to everyone that there is an expected responsibility and accountability for all employees, from the employees on the platform doing the fieldwork, all the way up through the management system.

He wanted to establish the vision, a policy, and a strategic plan to make sure that we executed those requirements internally and actually performed them in the field and developed a system and a culture that was preventative, as well as a high level of performance for the entire company.

He mandated that all employees, not just management, including management, were to take action every day on the job to maintain, establish, and promote these systems and practices. And that it was critical to your job and to the performance of Venoco that these HES measurements be performed.

Some of the measures that were instituted, some are standard regulatory requirements and some are not today.

Work-permitting practices, management of

change policies and procedures, contractor safety management programs, comprehensive incident recording and analysis, auditing inspections, mechanical integrity, and operator training were all the things that we identified were areas that we needed to improve in.

Again, some of these were required already to some extent, but to a large extent they were not. And so we took this on several years ago, to start a -- create a system and a culture within Venoco to improve overall, not just to the extent that was necessary by regulation.

Certainly, as mentioned earlier, the CEO directly influences HES performance throughout the system. He needs to make sure that message gets out. He needs to talk to the individuals in the field and throughout management, and he does that. And that's critical to our overall performance.

Communication throughout the management system and with the employees of how we're doing. We share our -- what we call our incidents and our observations with all fields, all divisions, with all employees, and all the way up through the CEO on a quarterly and a regular basis. We talk about it quite often. And this creates communication and

makes sure that everyone's accountable to what's occurring in the field.

HES performance is built into our staff evaluations. It's also built into our incentive programs. So the field employees understand this, the management understands it, and action is taken if performance isn't where the CEO expects it to be.

Safety observations is an interesting one, based on behavioral and facility observations. It's completely voluntary. All facilities within Venoco are required to participate in this program. Participation is required through the CEO's direction, and the management -- field management needs to figure out how they're going to do that.

And so it requires communication. It requires participation by the employees. The employees produce the observations, they monitor them, management reviews them, and corrective actions are taken and tracked.

And those reports go to management as well, all the way up through to CEO. So he does look at them on a regular basis. And he will comment to individuals if he's not feeling the performance is there.

Management of change is also something

that's applied throughout our organization. It includes practices and procedures, all the way up through equipment changes. It includes significant employee interaction within the hazard analysis, within the pre-startup safety reviews, operator -- operations procedures training and throughout the system.

And they're expected, again, to participate, and that's one area the employees actually enjoy participating in because they want to have involvement. They want to be involved in changes. They want to have a say in what's going on out there, and they do.

Best practices. I wanted to make a comment about the continued collaboration. Venoco has always felt that MMS and now BOEMRE is an organization that we felt proud to collaborate with. We've always felt there's been good involvement. We've always felt that there's been a good working relationship. I know that working relationship has taken a little bit of a slap in the face recently, but we feel the relationship is there and is a good one.

Some comments on SEMS going forward. We would like to see the actions taken by BOEMRE, which

are good ones, but would like to ensure that that becomes a performance-based system, not a prescriptive system.

There's a lot to be gained by allowing industry to participate and to allow industry to develop systems that work for them that meet the standards that are required by the agencies and not just be mandated to do things that don't work very well for a given facility or operator.

Also wanted to make mention of the current administration's focus facility review program. We think that's a very effective program. It's also very collaborative. It also covers many of the areas that the new SEMS program is intended to work with as well.

So both those programs we feel are good programs. We want to recommend that they continue with that effort and feel that they're good collaborative programs, but we'd like to, again, ensure that they're -- or try to ensure that they're performance-based and not prescriptive.

And that's it for us. Thank you.

DIRECTOR BROMWICH: Great. Thank you very much. Appreciate it.

Rob, Rob Hurley.

ROB HURLEY: I would like to thank the BOEM -- still having a hard time saying that instead of MMS -- for having me speak here today.

DIRECTOR BROMWICH: You'll get used to it.

ROB HURLEY: My background. I started in the mid '80s in the oil and gas operations offshore California on Platform A, the infamous Platform A where we had the '69 oil spill.

I was a roustabout out there, and I'm not ashamed to say I was the guy that used to empty the trash for the foreman and clean the galley and do all the things that a roustabout did.

Eventually I worked my way up to be compliance supervisor for the Torch and Nuevo when they were operating out here. They bought all the upstream production from Unocal when they left the state. I was in charge of safety for 15 of the offshore platforms -- that's a little over half of the current platforms off the coast of California -- and many more onshore facilities throughout the state.

And after going through, let's see, three reorgs in about six years, riding through the $10 a barrel oil prices, having my family and I moved several times, I decided to start my own consulting

business. I'm an independent EHS consultant. I primarily work in the oil and gas industry. I focus on policies and procedures. I do OSHA training, a lot of permitting, and periodic expert witness testimony.

I work with a lot of different agencies, always have. MMS, now BOEM; Coast Guard; DOT; California State Lands; OSHA, both on the federal side and California side. I work with multiple counties, air districts, and fire departments.

Also, a third-party auditor on the OCS. I have facilitated roughly 40 API, SEMP compliance audits on the Pacific OCS and I've done a few in the Gulf of Mexico region.

I believe that good morale equates to building relationships; not just with your employees, but agencies as well. And that equates to a safe operation.

I've always believed morale -- if we can keep our guys happy and they know we really truly care about them and we'll take care of them and stand behind them if they make a bad decision, 90 percent of all our regulatory issues will fall right into play.

What I would like to talk about briefly is

just what the industry was like when I started and actually prior to when I started in the oil fields before the '69 -- or, excuse me -- shortly after the '69 oil spill blowout.

I would also like to talk about where I think we are now and a little bit about where I think we'll be heading in the future.

Prior to the 1969 blowout on Platform A, spill cleanup technology was nonexistent. I hear stories. I wasn't in the oil fields at that time. It was 41 years ago. But I've heard stories of cleaning up oil with hay, hay bales and Joy soap. It's just not a technique that would even be considered today.

We had poor and nonexistent employee training.

We had no drug and alcohol testing. Drug and alcohol testing is something that occurred about the middle of my career in the 20-some-odd years I've been in the oil fields. It's one of the single best things we did in our industry to help improve environmental and safety compliance.

We had little or no EHS policies or procedures in place.

And environmental and safety compliance was

not a priority. In fact, it wasn't even a profession.

The Platform A incident was the catalyst that changed our safety culture offshore.

So where are we now? Let's be honest. We have a situation where most of the majors have moved out. We have one major left on the coast of California. When I started in the oil patch, we had -- every facility was operated by a major oil company. We had Chevron, Texaco, Union Oil, Shell, just to name a few. They're all gone.

We have limited pockets, and capital is much harder to come by. We also have aging facilities and we have an aging workforce. That's the truth.

So despite these barriers to safety and a safety culture, we still make EHS compliance a priority. Safety is No. 1, environment is No. 2, and production is No. 3. I believe that every offshore operator off the coast of California would agree with that statement.

Today most oil and gas operators have an entire staff of EHS professionals. A guy like me would not be in business in the '60s, or even the '70s.

It's not uncommon for an oil and gas company to have specialists in not just environment, safety -- they would have one for air district compliance. They may have one for hazardous materials disposal. They may have quality control people.

It's very common to have a complete staff of environmental safety people in an oil and gas company today. Even the smaller independents have a staff similar to that.

Agency inspectors visit the platforms here weekly. I've done a little bit of work on the Gulf Coast, and from what I've been told, some of the operators don't see MMS but once a year, and that's for an annual. It's just not the case here on the coast of California.

Most operators today, they participate in beyond compliance programs, such as BBS, behavioral safety -- behavioral safety, SEMP, and ISO quality control procedures.

And overall, our industry, EHS statistics have shown a steady level of improvement. And this continues to this date in the Pacific OCS.

Okay. Where are we heading post -- after the -- post-BP Horizon incident?

Well, first and foremost, there's a renewed focus on EHS compliance; not just by industry, but by federal, state, and local agencies.

As operators, we will continue to improve safety compliance, whether or not the BP incident had occurred.

There will be more focus on employee-driven plans, such as BBS, and human factors will be considered more often.

My fear with this renewed focus from many of the agencies is that we could create an adversarial relationship between the BOEM or some of the other agencies. That certainly hasn't been the case in the past. We've had a very cooperative relationship, which, again, builds trust between our people, management, and agencies. And I think that's desperately needed.

As I said before, that's -- about 90 percent of our regulatory compliance is going to fall right into play if we all trust each other, are truthful with each other, and we work towards the same common goal of having a safe operation.

Closing comments. Again, this is just from a perspective of an environmental health and safety consultant that works on the OCS. If I were the

BOEM, I would focus on the issues at hand. Specifically, I would zoom in on the BOP safety, deepwater, and exploratory drilling.

I would also continue the cooperative efforts on programs like the focused facility reviews. I think Keith had mentioned he also would support increased emphasis on these type of programs.

When I was with Torch and Nuevo, I think they called them the focused facility inspections. Very good program. The intent was not to come out and write violations for the company. The intent was to have a safe operation.

Our guys would have weeks of notice before we did these inspections. Those guys worked hard to make sure they looked good in the inspections, and our facilities looked better than they ever did the day we'd show up for the inspections. So I would like to offer my support for that program as well.

I would also like to see a final rule on SEMS, the Safety and Environmental Management System proposed regulation.

To be honest, I'm a little disappointed in the rule in that it didn't follow API as closely as we would have liked it to. We've been voluntarily

implementing SEMP, the API RP 75 recommendation, for more than ten years now. And it's just something we're comfortable with.

The new rule is a little bit different. It may take a little bit getting used to. But either way we go, I do support a safety and environmental management regulation, and I think industry would say the same.

And, finally, I think we need to focus more on enforcing existing regulations rather than creating more bureaucracy.

Thank you.

DIRECTOR BROMWICH: Thank you very much.

Our final presenter on this panel is Mark Steinhilber.

Mark.

MARK STEINHILBER: Yes. I'm with the California State Lands Commission, Mineral Resource Management Division. And we regulate the oil production inside 3 miles of the coast of California. To do that, we have 18 producing oil and gas leases. And to produce from them, we have four offshore platforms within that 3-mile limit. And also oil and gas is produced from two manmade islands as part of the state leases.

Over the past ten years, 168 million barrels of oil have been produced within state waters. And this has afforded the state 2.4 billion in revenue.

With regard to offshore oil spills that have occurred in this period of time from state oil and gas drilling and production, they are generally measured in just drops or ounces. There is typically less than 12 per year. And the average volume is actually less than a barrel.

So that means that they typically are all relatively small. And many of those do not actually occur from drilling, but they may occur from other activities on the platform.

Now, the regulations that we have that pertain to the oil platforms offshore can be looked at in these four major categories. We do have regulations that pertain to the actual drilling.

And in order to review or monitor compliance with those regulations, we have the drilling program being reviewed by engineers back at our field office. They look at the casing design and also verify that it's being tested. They are -- we have regulations on the blowout prevention equipment. And that's comparable to what our sister

agency, the DOGGR has and also enforces.

We have requirements or regulations for cementing as well as the mud program, and also regulations pertaining to critical operations.

Much of the time that the oil platform is out there producing oil, there's no drilling going on, yet the platform poses a risk of an oil spill, a different risk than the risk you have during drilling, that is, during production.

So we have safety requirements related to all of the production systems. There's a constant flow of oil and gas across the platform and into the pipeline coming ashore.

In order to afford or maintain safe operations, we have monthly platform testing, which is monitored by our inspectors. And the inspectors are also out there conducting surveillance on all the platforms and islands on at least a weekly basis. They're out there frequently. It's much more than just once a month.

They're also involved with pipeline inspections. The pipelines are inspected in a number of different ways, tested. They're looked at internally.

And we also conduct something we call our

safety and spill prevention audit. It can be compared somewhat to the focused facility inspection, although we do it a little differently and it takes a bit longer.

State of California has requirements for oil spill contingency plans for all of the platforms. And we review those and make sure that they are kept up-to-date and that they have the appropriate contracts in place for spill response contractors.

And we also have extensive regulations on requiring operations manuals for our platforms, and that is where we get into some of the safe management systems and also the human factors-type elements.

Now, looking a little more closely at the drilling regulations we have. Our oil and gas drilling regulations are in Article 3.2 of our regulations. We talked about there being well casing requirements. There's cementing requirements, requirements for pressure testing the blowout prevention equipment for both surface and subsea. However, we have mostly or virtually all surface-type equipment being used because we have platforms.

We have requirements for the supervision and training of personnel, including well control drills and requirements for mud and well monitoring.

The drilling regulations are maintained -- or compliance is performed using our staff engineers. They review the drilling programs, including the casing and cementing. They do attend the platforms and inspect drilling.

And we have a sister agency, the DOGGR, which also reviews drilling operations, but they also do the land side. So they do it on a larger basis. They are in attendance out on the platforms.

The latest version of the DOGGR's well control manual matches up with the state land regulations, and these all are comparable or similar to API RP 53. They're based on that standard.

Now, when the blowout prevention is required during production. Anytime tubing is pulled or when the wellhead is removed, we require blowout prevention. Prior to removing or installing BOPs, the annulus must be sealed by the tubing packer and a tubing plug is installed.

Blowout prevention equipment is needed if redrilling or reperforation is required and also for final abandonment.

And a lubricator, which is a bag-type preventer, is installed or used when we do wireline work.

A little bit of history. And you've heard about the Platform A blowout, but in the 1960s our state platforms were installed. So they're getting pretty old, and we have -- we're concerned with that. We're trying to watch them closely because of the structure and so forth.

In 1969, the blowout occurred on Platform A, which is in the federal waters, and that led to new regulations.

Our inspection program came about. It was upgraded at that time. And there was a requirement for contingency plans.

1980, the reg- -- the state regulations were upgraded, and we started to look for the API RP 14C style safety system, safety controls on the platforms. It also came with revised drilling regulations and the annual requirement for pipeline inspection.

In 1986 we began to use a Safety Audit Program to go and look at the design of the platforms as well as the safety system. And by this time, API Recommended Practice 14C had come into

place as a design standard, and we were using that at that time, and still do.

In 1990 we had Lempert-Keene-Seastrand Act, which occurred as a result after the Exxon Valdez and also the American Trader spill off Huntington Beach. This added requirements for marine facilities to be inspected and also added a best achievable protection requirement.

We realigned the spill drill and the contingency plan responsibilities. The Department of Fish and Game, Office of Spill Prevention and Response is responsible for much of the response capabilities and coordination within the state.

In 1999 we further augmented our Safety Audit Program when -- which we gained some funding and brought on safety auditors, and that program I'll go into in a little more detail.

Our production regulations set up or establish our ability to do monthly testing, witnessing on the platforms, performed by the operator themselves.

This testing takes about two to three days. It goes through the production systems, including the wellhead safety valves and all of the pressure trips and level trips and so forth. It includes

some alarms and the main shutdowns on the platform. It also covers firefighting, lifesaving, some preventative maintenance systems like cathodic protection.

There's an average of over 300 devices that are physically tested every month on the state platforms. The purpose of this is to make sure that they perform reliably when called on.

The deficiencies are corrected immediately or the equipment or the well is placed out of service.

While the inspectors are there as part of the monthly test, they also inventory all the on-site spill response equipment. And they also attend the platforms at other times during the month and conduct daily inspections. They follow pipeline routes and check for pollution. And they also perform royalty verification as part of their duties.

So the safety and spill prevention audit that I mentioned is where the State Lands Commission has really started to move in the direction of the safety management systems and also started to look for more of the human factors element in how we can help prevent oil spills in those areas.

In order to do that, we do a comprehensive evaluation and check for compliance with the federal, state, and local design codes, as well as the industry practices, including the API standards.

We look at the design of the platform. We verify that it remains fit for purpose and that it's being properly maintained. It's a progressive-type inspection. So if we start to find problems in certain areas, we go ahead and dig deeper. We take almost as much time as we think we need to to get through the entire facility.

And every one of the auditors that is out there -- when we're done, we know that that platform is safe. Our auditors are all ex-company employees, so basically we have a set of ringers working for me.

All of the deficiencies are corrected. We give the company a list of the items that we find.

DIRECTOR BROMWICH: Mark, I think you have a number of additional slides. Can you try to wrap it up in about five more minutes or so?

MARK STEINHILBER: Yeah.

DIRECTOR BROMWICH: Thanks very much.

MARK STEINHILBER: We cover a bunch of different areas with our safety audit. We are

trying to address human factors as well as safe management practices like the other speakers have talked about.

And in this safety assessment that we also conduct, we give the company a confidential report. This is basically a side audit of their SEMS- or SEMP-type management. So we do that. And that's an interview-based assessment that's done in conjunction with our safety audit.

To do this, the safety audit, as well as our inspection program, looks to make sure that all of the improved engineering that's occurred over the years has lowered the incident rate of undesirable incidents.

To go beyond that, we are looking for improved safety management, our SAMS process looks for that. And that hopefully has helped lower the number of incidents.

And then, finally, we're trying to get after the human error, which is the third piece of the curve there. We're trying to drive the number of incidents that occur down to the lowest possible.

To do that, we need people, we need the facilities to be of the right design and properly maintained, and we need the company management to

have the right programs and operating procedures in place, among other things.

Looking at it another way, over on the left-hand side of the curve, when you have a company that in the early century -- early part of the century where there was no or minimal regulations and they just did things by the seat of their pants, you had reckless or reactive-type operations.

Through the '60s and into the '80s and so forth, we've had rule book-based compliance or regulations.

And from that point, we needed to move further into getting the safe management practices from the company, as well as looking at human factors and making sure people were making the right decisions.

So in order to do that, we hope that our programs, including our SAMS-type tool, is effective in looking at the operations of our companies.

And our safety audits started ten years ago. And in that time we've done two full cycles of auditing within the companies. And on the second round of audits, we ended up with about half of the items identified.

So we can see a clear improvement in their

maintenance, in their management of their operations, and in many of the things that helped their personnel perform their job safely.

And so the next round that we go through, we're sure that we're going to see even better compliance in our SAMS-type tool. We're also seeing that the companies have much improved management systems. And, in fact, their key performance indicators, like their reportable accident injury rate, have gone down with implementation of these improved programs.

And I think with that, I'll just wrap it up. We have some comparisons with deepwater, and you can --

DIRECTOR BROMWICH: Yeah, and if you can provide that, we'll post that on-line, as can you. So I think that would be helpful.

MARK STEINHILBER: Yeah.

There's one final slide with links --

DIRECTOR BROMWICH: Sure.

MARK STEINHILBER: -- that shows where this -- there's a report that's tied with this, this presentation, or much of it was given to the State Lands Commission this past Friday at a commission meeting. You can get to that all on our Web site.

And so there's links available.

DIRECTOR BROMWICH: Great.

MARK STEINHILBER: Thank you.

DIRECTOR BROMWICH: Thank you.

And thank all of our panelists for their presentations.

I guess I have as many comments as questions. So let me start.

Linda, thank you for your very thoughtful analysis and set of comments on really the history of drilling and the factors that have gone into prior accidents, as well as what you see as sort of the necessary steps that are needed.

Our focus right now, as I'm sure you can understand, is to make the existing development as safe as possible. There are in the works proposals and apparently dollars for us to hire a significant number of additional inspectors, which will be enormously helpful. We have not been as dramatically understaffed here as we have in the Gulf. And so I hope we, for the first time, really, will have the resources that we need to do the kind of adequate inspections that need to be done.

And with respect to offshore, that is a high priority, as you know, of this administration.

It's a high priority of Secretary Salazar. But you're quite right; it seems to have been pushed off stage for the time being by the focus on Deepwater Horizon.

But we will be returning to it. And, in fact, there are resources continuing to be devoted to it, even as we speak. But thank you for focusing on those issues.

Ellen, Bill, do you have any questions or comments for Linda?

BILL HAUSER: No.

DIRECTOR BROMWICH: If not, let me move on.

Keith, you talked about, again, safety and environmental protection. And you talked specifically about the SEMP or SEMS program and the incorporation of API Standard 75, and I think some of our other panelists did that as well.

Just one thing I wanted to bring to the panel's and everybody attending the forum's attention, these API standards have in the past been available for inspection, but they have not been as broadly available to the public as I think is appropriate for a public agency who incorporates industry standards and regulations.

And so I don't know how many of you noticed

that yesterday, after a series of discussions that I've had with Jack Gerard of API, for the first time those standards are now being made publicly available. So that not only will you, when you go look at our regulations, see the text of our regulations and that we are incorporating certain industry standards by reference, you're actually going to be able to see the standards.

I did not realize that there was that kind of proprietary protection over those standards up until now. I understand the reasons for it. But I also understand even more deeply the reasons why the public needs to have access to them.

So I believe as of today, that access will be guaranteed in a way that it has not been before. So there has been a lot of commentary on this panel and others about those API standards. And I know a lot of work goes into those standards. And I just wanted to let people know that those are now going to be more broadly available to the public than they have been in the past.

I didn't have any other questions for Keith.

Ellen, Bill, I don't know if you do.

ELLEN ARONSON: I have a question that's

really for both Keith and Rob and that has to do with the focus facility reviews that we do in our office and both of you spoke to that as a very useful tool and about performance-based and prescriptive regulations to ensure safety.

Because I think that these are sort of related issues? And there is -- and, sorry -- Linda, you yourself were talking about the difficulty in regulations taking -- you keeping up with the rate of change in the industry and technology.

And I'm wondering whether or not you think that increased emphasis on the kind of focus facility reviews is the more useful tool as opposed to the -- I mean, our inspectors are out in the field every single day -- as opposed to that, or how we might change those inspections, those daily inspections, especially with respect to workplace safety issues.

So I don't know if you have any thoughts about that.

KEITH WENAL: I'll start.

Regarding the current administration's inspection efforts on a daily basis, those are valuable. And I don't know if they're doing them in

the Gulf or not, but from the standpoint of the folks here in the Channel, that one-on-one discussion with the inspectors on a routine basis is very helpful. It allows the inspector to have some confidence that the people he's talking to know what they're talking about because they're -- or they're both learning to some extent.

The inspectors are obviously very up to speed on their regulations and so are the operations personnel. And so they can have a useful discussion and actually improve things rather than just writing a violation and then walking away with no explanation.

It allows the operations personnel, who believe they understand the regulation, to explain kind of where they are and why they did a certain thing or how they're doing it. And I think that's valuable for the staff, the MMS staff and now the BOEMRE staff, to understand that and have that conversation.

And I think the same is true for the continued focus facility reviews as well. It's the same sort of environment. It's meant to be a collaborative effort. It's meant to be an opportunity for the entire operating system of the

platform to be evaluated by the BOEMRE staff.

It's also an opportunity for the operations staff for -- again, to provide input and explanation for how they do things and are they doing them correctly or not. And if things are identified as potential deficiencies, they can help work through that in an open environment as opposed to a prescriptive, you know, fine-writing or violations-writing environment, which would be very different.

ROB HURLEY: I think Keith took most of my thunder, but I would say that, again, we support the FFR program greatly.

I don't think that you can do less of the normal inspections. I do encourage those as well and they're important. They're a different type of inspection. The FFRs and the FFIs, which were done previously, are more SEMS-based, SEMP-based inspection programs. They're much more thorough. They're top to the bottom. They're going through procedure manuals and a lot of other items on the platform. So I think they would compliment each other.

I think if the MMS or -- excuse me -- the BOEM personnel was unlimited, I would add a lot more

staff to the FFR program. But I understand that you have limited personnel as well.

ELLEN ARONSON: Thank you.

BILL HAUSER: One question for Keith. You mentioned the safety observation program. How has that evolved over the time that you've implemented that?

KEITH WENAL: Well, those types of behavioral-based programs have been out for a long time. DuPont STOP is big one. It's out there. There's a few other, if you will, off-the-shelf products like that.

We talked internally a lot about that. It was determined that we didn't want to just buy something off the shelf because it would have the -- it would have to be something we'd have to continually -- to support and have vendor support, and it created a lot of internal facilities which we didn't necessarily have.

So we decided to try and develop something internally that was based on the same concepts, but allow the employees to build it. And so with their involvement and management's involvement, we've created something that's very similar to many of the behavioral-based systems. It's completely voluntary

based. The employees are involved with it from top to bottom.

Essentially it's a system that looks at adverse behaviors, unsafe conditions, near-hit events. It allows recognition by the personnel to recognize others within their system or their team or contractors that have performed well. We do include contractors in the system. And it performs well.

We probably get somewhere in the area of a thousand observation reports a year. And these are all events that are issues that we work with management and with the operators to improve or change, whichever the result is.

BILL HAUSER: Thank you.

DIRECTOR BROMWICH: Rob, I just wanted to comment on some observations you made. I think you worried that there might be a new adversarial relationship between my agency and other agencies on the one hand and the industry on the other.

I would like to distinguish between having a more aggressive enforcement capacity and an adversarial relationship. I don't think one needs to lead to the other. I think it's actually up to industry in terms of how it reacts to more

aggressive enforcement activities.

I fully accept that most of the participants in the industry are law abiding, and those participants are worth fully cooperating and collaborating with.

On the other hand, as I think you know better than I, there are certain operators that, while we maybe should be reluctant to call them outlaws, are not up to the standards of others and seem to treat noncompliant facilities just as a cost of doing business.

With respect to those operators, we'll be extremely aggressive and we'll look to develop more regulatory tools to impose larger fines than we have in the past. And if that leads to more adversarial relationships with those operators, that's fine.

I don't think it needs to lead to an adversarial set of relationships with the other operators who do, in fact, have the right kind of cultures, the right kind of safety cultures, the right kind of enforcement cultures.

So I think that's an important distinction to make, and I just wanted to make that point.

Ellen, Bill, do you have any further questions for Rob?

BILL HAUSER: No.

DIRECTOR BROMWICH: One question for Mark. You said that all of your inspectors come out of industry. We have been criticized for that because it leads allegedly to coziness between the industry and the regulators. And one of the things we're doing to deal with that is to develop recusal and conflict of interest rules that should be out shortly.

I have two questions for you:

Number 1, do you have such rules, or how do you guard against the bias towards the operator of former employees of that operator who are now your regulators?

And, No. 2, have you thought about or have you, in fact, developed alternative recruitment mechanisms so that you're not a hundred percent relying on inspectors coming from industry?

MARK STEINHILBER: We have informal rules. I try not to send a person from a particular company to them. And then any of his decisions or the issues that are brought up do get multiple levels of review above him before they're effective.

We have not looked for other avenues to find an inspection staff. We have found it

difficult to hire. And on the other hand, we have found that the people that we have hired that have been in the industry are among the best qualified, most experienced people to put on the job.

What you have to do is clearly set forward the job requirements and the standards to which they're performing that -- those duties.

DIRECTOR BROMWICH: Do you have a period of time within which you won't allow a former employee of an operator to inspect that operator's facilities?

MARK STEINHILBER: Not a formal one, but we have people that -- they work as a team. We have them typically not working alone. And they get quite a bit of supervision, especially when it comes time to write up any of the items that they've identified. And we pay a lot of attention to what things are considered as a recommendation as compared to what is a regulatory or compliance-type item.

We do not have a -- we don't issue pinks. We don't have that type of regulatory system. But we do have other avenues because we are the leaseholder. So we use that. And there's other avenues with regard to our regulations to gain

compliance.

We also find that we do not have an adversarial relationship with our companies, including, you know, companies represented by our other speakers.

But we do try and drive them in the direction that we want. And they really come up to the challenge. I mean, these companies have gone a long way in the last ten years. We've really seen changes. And they really have adopted these safe management practices. The behavioral-based type systems, we've seen them have incredible performance effects within a couple of companies to note. So...

DIRECTOR BROMWICH: Thank you.

Ellen? Bill?

BILL HAUSER: One question for you.

How do you measure the performance of the operators out there?

MARK STEINHILBER: With regard to safety?

BILL HAUSER: With regard to safety, yes.

MARK STEINHILBER: One of the key performance indicators can be their reportable injury rate that they report to OSHA. Now, that's not exact and that's not the all-encompassing safety measure, but we can look at that along with their

performance at their monthly inspections, whether they have -- how many deficiencies they gain normalized to the number of devices that they test.

We look at their performance, at their safety audits, and we have knowledge of how they performed under our safety assessment of their management systems.

We know if they scored really well. We know if they -- in previous SAMS how they did and then how they scored this time. And we typically see continuing improvement with all of them. And on some of them, they're reaching some pretty good -- pretty high scores.

BILL HAUSER: Thank you.

DIRECTOR BROMWICH: Anything else?

Okay. I want to thank all four of our panelists for a very lively and informative session. I think that was terrific.

We'll take a 15-minute break now. So -- before the third panel. So we'll resume at 20 minutes to noon. Thanks very much.

(Audience applause.)

(Recess taken.)

DIRECTOR BROMWICH: Okay. Let's go ahead and get started.

This is our third and final panel of the morning.

And we're very fortunate to have a very distinguished group of public officials from the State of California and from the greater Santa Barbara area here with us.

Let me introduce them. Starting closest to me is Abel Maldonado, the Lieutenant Governor of California.

Sitting next to Lieutenant Governor Maldonado is Lois Capps, who is the congresswoman representing the 23rd District in the Santa Barbara area.

Sitting to her left is Helene Schneider, the mayor of Santa Barbara.

Next to her is Margaret Connell, the mayor pro tem for Goleta City.

And, finally, to her left is Janet Wolf, who is the chair of the Santa Barbara Board of Supervisors.

I want to thank all of you for being here today. And we very much look forward to your comments and remarks.

Lieutenant Governor. Go ahead.

LIEUTENANT GOVERNOR MALDONADO: Well, first

of all, thank you for this opportunity. I think we're here to say a few words about offshore oil and what we believe is going on on the coast of California.

For me, obviously, as Lieutenant Governor of this great state, I just left Governor Schwarzenegger and I told him where I was coming and he's been an advocate. I think the most important thing for us, obviously, is the coastline.

Before I was the Lieutenant Governor, I was a senator of the 15th senatorial district, encompassing one-third of the California coastline.

And I must say to the folks here in the audience that I really believe that as a state, California is prepared in case of a disaster. Not that we want one to try how prepared that we are, but I can say that we are prepared.

I've gone through the office of OSPR, obviously through our office, that deals with all of offshore platforms, and I must say that we have four that are in our state property and we have two mainland. And obviously there's a total of 27 off the coast of California.

Now, there's no secret. From the get-go with -- me personally have been very, very much on

record opposing offshore oil off the coast of California. Why? I'll share with you why.

Number 1, the economic stability and the employment of the workforce of this great state depends on a beautiful coastline, No. 1.

Number 2, I don't remember the oil spill of the '69 and '70 off the coast of Santa Barbara, but I can tell you that growing up, many folks have reminded me of what went on and how it hurt the economic stability of the state.

And last, but not least, if we don't protect the coastline, no one will. They stopped making it a long time ago. And it is an issue that was brought up to me by my grandfather early on in life.

Now, on the basis of what we're doing, just briefly, all I can say is not long ago I toured the Gulf Coast. And it was a 24-hour trip, but it was enough for me to learn a little bit about what went on.

And through all that process, one of the reasons I toured is because I am one of three members on the coast -- excuse me -- on the State Lands Commission, which regulates the leases off the coast of California, the tidelands and so forth.

Some of the things that we've come up with, I think we've followed a lead from MMS, and I'll talk a little bit about two proposals that I'm pushing forward in State Lands.

But through this process we made it very clear that I needed to go to the Gulf Coast to see what had happened to make sure it wouldn't happen off the coast of California.

And I learned that the processes are completely different from what we have off the Gulf Coast.

Number 1, the depth of the oil that is being extracted off the Louisiana coast is one that's probably anywhere from 15- to 18,000 feet off the top of the water.

Here in California, we're drilling -- or they've drilled in the past 2- to 300 feet. The depth of the water sometimes 3- to 4-, 500 feet. So it's shallow water, No. 1.

Followed by No. 2. The pressure of the oil that is coming off the Gulf Coast in those deep wells is amazingly, amazingly high. We don't have that.

However, we do have wells off the coast and we need to be protected and are we prepared?

I can report that tomorrow I will be having a meeting in Sacramento which will bring everybody that owns and operates a lease off the coast of California with one thing in mind. I want to see the plans that they have for cleanup in case there is a disaster.

Currently, today, we have the same cleanup plan that the federal government has, which is a seven-day plan for cleanup. I'm in the process of trying to extend it in California to a 30-day plan in case there is a spill off the coast of California.

Followed by if there would -- I mean, obviously I'm opposed to offshore drilling, but I don't control off where federal government can drill. But I can say this, is that I believe that if there's ever going to be drilling off the coast in federal waters, there needs to be a third party on that platform as those drills start to go in to make sure that there's no shortcuts, to make sure that the folks who are drilling are prepared for disaster, but more importantly, there is third-party verification, hopefully somebody from the federal government.

So those are the two things that we are

proposing in California and that we think it's something that we can look at.

I know there's a moratorium in federal waters. Obviously we don't have any proposals of drilling. There was one not long ago, but it was a proposal that was off of an existing platform into state waters. That proposal had local support. Since the oil spill in the gulf of Louisiana -- the Gulf of Mexico, that has changed. So I don't see that proposal moving forward.

That was a proposal that was going to come right to State Lands. I don't see it coming before us any time soon. And if it did, I would be voting no on the project. I think I've made that very clear.

So I'm glad you're here. I'm -- just wanted to share a little bit about what we're doing here in California. It is a partnership because it's not only the state; it's also the local communities that live and die by the coast of California.

I know there are some challenges. And I know there are some challenges in the Gulf Coast. They're totally different, and that's how I feel, just coming from the Gulf.

I still don't have a correct number of wells off the coast of Louisiana. I've heard 3500. I've heard 5400. I've heard 2900. I know that in California we have 27. And I believe under our office of OSPR, we are prepared.

Now, we need to be more prepared and that's why we are moving forward with our situation in State Lands, so hopefully it will comingle with what the federal government is doing.

And if you look at what we're doing, it's not something new. I'm taking some of the language from MMS of what they're proposing in the federal government. And I hope they do it soon because it's important that we move forward with that.

DIRECTOR BROMWICH: Thanks very much, Lieutenant Governor. We very much appreciate your comments.

Congresswoman Capps.

CONGRESSWOMAN CAPPS: Thank you, Director Bromwich, for holding this important topic, the forum in Santa Barbara here on the central coast.

As you know, the majority -- overwhelming majority of offshore platforms on the West Coast are located here in the waters off my congressional district, home to many of us here. So it makes

sense to hold your West Coast hearing in Santa Barbara.

I saw firsthand the devastating consequences of the 1969 Platform A blowout just a few miles from this very spot. That spill dumped millions of gallons of crude oil into our Channel, killed untold amounts of wildlife, and polluted our beaches for years. But it also galvanized a burgeoning environmental movement, and it spurred the first Earth Day.

Now we see that our spill pales in comparison to what's going on in the Gulf of Mexico.

I accept the challenge that our response to this current tragedy must similarly match, if not exceed, that original response over 40 years ago. And it must include far-reaching reforms to protect our ocean and our coastal economy.

We must reduce our dependence on fossil fuels and move toward energy sources that can't destroy our coastline or leave us captive to hostile countries.

But since we can't stop drilling overnight, we must do everything in our power to ensure that such a disaster never happens again.

And to that end, the Congress that I'm

proud to be a part of, democratically led, has vigorously investigated BP's spill and offshore drilling. We've exposed a system for regulating offshore drilling that has been broken.

Oil companies were allowed to cut corners on safety and environmental protection. And virtually no effort was put -- I say this in the past tense -- was put into preventing accidents and improving spill response technologies.

Basically, offshore drilling decisions were being made by the oil companies for their benefit, their benefit, instead of the public's. Sadly, the people in the Gulf, and I would say all of us, are now paying that price.

In response, the House of Representatives has passed legislation to require strong new safety and environmental standards for offshore drilling. These standards would require independent certification -- independent, third party my friend has said, certification of critical drilling equipment and proof that we can respond to future blowouts or major spills.

The legislation would increase penalties multiple times for safety violations. It would put an end to practice -- the practice of issuing

environmental waivers for drilling plans. Something that was commonly done.

And this legislation would also increase the number of inspectors. I know that has been acknowledged this morning as a real shortfall in this current situation. And it would create a training academy. And I think we heard previous panels acknowledge the need for well-trained federal inspectors or third-party inspectors to ensure that only qualified individuals are serving in that capacity.

But really, more importantly, the Congress and this current Obama administration have taken the most serious steps ever to break what former President Bush called our addiction to fossil fuels.

We've put into place far-reaching measures to improve this country's energy efficiency. Cars, trucks, air-conditioners, buildings, and appliances will all be getting more energy efficient in the coming years. And I'm proud to say that the State of California has really led the way in demonstrating the effectiveness of such standards.

And we've made a real commitment to expanding the development of clean energy sources, like wind and solar. This will ensure that America

produces more and more of its energy cleanly and at home.

America must lead the way in developing the clean energy technologies of the future, much like we did with cars and computers in generations past.

The need for an increasingly energy-independent America is the real takeaway, in my opinion, from the BP disaster.

So I thank you for coming here today. Hopefully forums like this one can help produce something positive, that something positive comes out of this very tragic situation in the Gulf of Mexico.

Thank you very much.

DIRECTOR BROMWICH: Thank you very much for your comments and your observations.

Mayor Schneider.

MAYOR SCHNEIDER: Thank you very much. And thank you, Director Bromwich, for having this forum. It's an honor for me to be participating in this and for choosing the city of Santa Barbara as the location.

As you've heard this morning, we have quite a history when it comes to offshore oil drilling and the community response to it.

And while I'm not an engineer, while I'm not in the oil and gas industry, while I've not been on one of the platforms, I am a mayor of a city that has strong community ties and a strong commitment to finding new innovative ways to keep our coast as pristine as possible and to do whatever we can to work with our colleagues in trying to find alternate ways of -- alternate forms of energy in a way that also respects and acknowledges the current production that's off our coast and to make sure that's done as safely as possible.

As a mayor of this city also and one of the major points that you wanted to discuss today has to do with oil spill response.

And certainly being one of the first responders is local government when something tragic happens. We are also the most closely tied to our community when it comes to communication and getting the word out about accurate information and how people can effectively respond in their homes and their businesses to something such as an oil spill. That was a major issue in 1969.

And I had the opportunity this past June through a U.S. Conference of Mayors one-day trip to actually visit the Gulf and meet with about 25 other

mayors, most of them from the Gulf Coast region, and that importance of having that connection between federal, state, and local government and keeping that connection and that communication, you know, precise and accurate.

The other concern certainly that we have and we've heard a lot about how important it is to keep trainings, to keep safety technology as strong as possible, to test those technologies as much as we can, but to acknowledge that spills do happen and they will happen.

So what can we do beyond just trying to prevent the worst-case scenario, but what can we do as opportunities to move beyond that?

And one of the things I learned at the Gulf and also here with other kind of big disasters in our area has to do with both the real and the perceived impacts, economic impacts and environmental impacts to our community.

Such as looking at a very active fishery industry off our coast, the tourism industry here in Santa Barbara, the migrations of marine mammals around the Channel, the animal impacts here.

And certainly as we've seen in the Gulf and we saw back in 1969, there were real tragic impacts

that we've seen in both cases. But also in terms of an economic impact, the perceived opportunities or detriments that have occurred where, in the Gulf, for example, people choose not to eat shellfish and what that does to the industry there because of a perceived fear.

The perceived impact that you cannot visit pristine beach lines along Florida's coast because they think that it's polluted. And some areas do need cleanup and they are happening, but other areas have not been affected. And that communication piece is huge and how that reflects our local economy and then the local families and businesses here is paramount certainly as a city leader.

I think we have an opportunity here in that, yes, we want to make sure the current production that's in place is as safe as possible, that is regulated, as was mentioned before, and has outside agencies looking in to make sure all our I's are dotted and T's are crossed.

But we also have an opportunity of a community that has been -- it's in our psyche, in a sense, the Santa Barbarans, to try to be innovative and to look to new ways to be both environmentally strong and fiscally sound and looking to a community

that can work with you on trying to find new alternatives for clean energy, new alternatives for renewable energy.

Our own community here also in June is very connected to what's going on in the Gulf. They feel it because of their own history here and want to do what they can, to the point where community groups have come together to raise funds to help Gulf response and cleanup efforts. There's actually a fund-raiser happening this Thursday on just that.

And working, trying to figure out how can we focus on what's happening here locally in Santa Barbara, but how does that affect national policy and state policy?

And so that's one of the reasons I'm so pleased that you're here in Santa Barbara, because I know that if we can look to what we currently have as a status quo, but then look to see how innovative we can be in terms of alternate forms of energy, what kind of new -- what kind of new investments can be made in other new policies, you will have a community here that will be standing right beside you in making that happen. And I'm sure there will be many, many other areas throughout the country who will do the same thing.

So I do appreciate the opportunity here and would look forward to working with you in those capacities in the future.

Thank you.

DIRECTOR BROMWICH: Terrific. Thanks very much for your comments.

Mayor Pro Tem Connell.

MAYOR PRO TEM CONNELL: I would like to echo the appreciation of my colleagues here of your holding this hearing in Santa Barbara.

I was here in 1969. My husband actually is a marine ecologist. And so we were quite involved with many people in our living room discussing what should be done about it.

The oil industry is a dirty business, and I don't say that in a pejorative sense, but as a fact. Drilling can be dirty, whether it's the mud or an actual blowout as we've seen in the Gulf.

The piping of the oil to the mainland, there's a possibility of leaks. And actually at the processing, you can have leaks of gasses, and this is something we do hear from our citizens in Goleta, that they are smelling noxious gasses from time to time.

And so -- and then until it eventually gets

to a gas station near you, there are multiple ways it impacts on the environment.

In my city of Goleta, we actually do have oil industry. We have the Venoco onshore processing plant. Actually, on one side it has the Bacara Resort & Spa; on the other side, a golf course and nearby residential areas. So right in our midst, we have oil industry going on.

Offshore is Platform Holly, and there is a proposal to extend drilling from that platform.

And then when it comes onshore, it's piped to the Ellwood Marine Terminal, which is just outside of our city boundaries, from which it is then piped to a barge, the last remaining barging of oil in the state of California. And, fortunately, recently, that barge was required to be double-hulled instead of single-hulled.

So, you know, the idea of hazards from the oil industry in our area are quite real, and we have seen some improvements, but there's still a long way to go.

Clearly, along with everybody else, I think we'd like to see the oil industry go away, but we realize that's not going to happen. And, also, I think we realize that even with new technologies,

there are likely to be spills through human error or technology error.

So faced with the difficulty in doing a hundred percent cleanup of spilled oil, what's the next step? And I think that that has to be increased prevention.

I think that any new leases and drilling which are approved, then prevention has to be the key to safety. There are -- this means regulation, inspections, testing, and constant monitoring by a third party for doing the monitoring.

We must have strong and effective standards and no shortcuts.

We need frequent safety drills, both random ones and planned ones, and maintenance training. I think we heard a lot of this with the earlier panels, about the importance of training. We need review and testing of aging platforms. The platforms around here were mostly built in the '50s and '60s, I believe.

We need annual testing of undersea pipelines, which are also aging. And they should be probably tested annually, not every three years, as I believe is sometimes required.

We need oil spill contingency plans, what

to do if operations need to be suspended during critical operations. Again, we heard some of this from our earlier panelists.

Any new drilling should require staff review all the way, with daily drilling reports rather than the weekly reports, which I believe are required currently by the federal government.

The California State Lands Commission standards are more stringent than the federal standards at this time. And I want to add, Santa Barbara County's standards are even more stringent than that. They depend on multi-agency oversight, including the County Energy Division, Building and Safety, Office of Emergency Services, the Fire Department, and the Air Pollution Control District. They form something called the County Safe Systems Reliability Review Committee.

And I think this kind of oversight is incredibly important for any sort of oil operations off our coast.

Santa Barbara has been fortunate not to have any more than minor spills in the last 20 years. But that is no accident. Constant oversight by an independent agency has been critical to maintaining this recent safety record.

There is another concern which was raised recently, I believe, in a State Lands Commission report, which is that -- the problem of finding the staff to do the inspections which are necessary to maintain safety. Because these people on the staff become very expert, and many of them, then, get hired by the oil industry so that they're no longer available for the government service, which is so important to maintain this as a safe industry.

I don't know whether there is a way in which the federal government can help with this, but I am concerned that there might be a critical safety -- shortage of well-trained personnel to oversee this industry in the future.

DIRECTOR BROMWICH: Thank you very much. Appreciate your comments.

Ms. Wolf.

JANET WOLF: Thank you very much. I also appreciate the opportunity to be here. It is an honor.

I just want to state that what I will be talking about is pretty much my personal experience, my education and my work experience, and as that relates to health and safety on the oil rigs.

I know that that was the focus of this

forum although it's difficult for me to not get into the political aspects and the environmental damage that is caused by spills, but I think my colleagues addressed those issues very well.

Our County Board of Supervisors has been grappling with these issues on numerous occasions. We don't oftentimes find consensus on our board. We have -- it's usually a 3-2 mix, one way or another.

I will say that most recently we did submit a resolution in favor and in support of SB 3358 that was mentioned earlier today, and that is the moratorium of no new oil -- oil exploration on the West Coast. And that is my personal belief as well.

I came to UCSB in 1972 after the oil spill. And I got my degree here, and then went to UCLA for my master's. And my focus was on human factors and ergonomics.

So when I saw what this panel discussion was about, it piqued my interest. Also because of the fact that I felt that there really has not been a lot of attention in understanding the relationship of what actually happened on the oil rig and how it could -- what could we do to prevent that?

And, you know, I don't think that there's any doubt that this is a very highly complex and

dangerous industry. And in my opinion, it demands regulatory oversight, accountability, and transparency.

But I also think there has to be a system in place and an understanding of not only best practices, but scientific facts on what you do to ensure safety of the workers who are on the rig.

And I think we heard in earlier discussions different programs and an operator who does seem to take this very seriously.

When I -- I worked for 25 years as a rehabilitation consultant. And I went down to Ventura and did job analyses on roustabouts. And so I had a -- I learned a lot about what folks do on land. I have no idea what goes on on the rig. So it's totally foreign to me.

So what I did yesterday in preparing for this was I went back to some of the things that the County did. And I have to admit to you, I actually forgot that we dealt with this issue.

Back in 2009 the County Board of Supervisors commented on a pending five-year leasing program and proposed safety regulations that were released by MMS in June of 2009.

The Board of Supervisors discussed this in

great detail. The MMS proposed safety rules in June of 2009 stated, as a result of MMS research conducted, it appears that equipment failure is rarely the primary cause of the incident or accident.

However, in most cases, accidents and oil spills can be traced to human error and/or organizational failures.

MMS report goes on to emphasize human factors, encouraging the industry to ensure safe and environmentally sound operating practices, to focus efforts on those using equipment, on human behavior, human organizational errors, and so forth.

And this is the interesting part.

MMS even referenced the American Petroleum Institute's recommended practice development of a safety and environmental management program for offshore operations and facilities from a May 2004 report that contained 12 safety elements.

Unfortunately, MMS at that time recommended the adoption of only 4 of those 12 elements. This recommendation would not only cost the industry less, but the audits would occur every three years rather than annually.

Now, getting back to the County. We had an

opportunity to respond to those recommendations. And on September 1st, we sent a letter to MMS, insisting that all 12 of those elements should be required.

So for me to -- and we had that conversation at our board meeting because I asked the question, why aren't we, in our letter, requiring -- or asking MMS to include all 12 of the elements?

So to have this opportunity to speak to you face to face and ask the question -- I don't expect an answer -- but to stress the importance of -- and really the -- I don't understand why, unless it is for -- from a financial -- for financial reasons or that it takes too long.

But, you know, one thing that has gotten lost, I think, in the Gulf Oil spill that is -- not really lost, but I don't think it has gained -- doesn't seemed to have gained much traction is the fact that 11 people lost their lives. And how tragic is that? It was, like, well, 11 people lost their lives, but what -- what was the reason for that? How could it have been prevented? What was the impact of the loss of those lives?

And yet we have so many people out on our

rigs. And we want to make sure that they're in a safe environment.

So we sent the letter on September 1st, insisting that all 12 elements be required.

Now, after the Gulf Oil spill, on April 24th, CBS reported that BP America, in their September 2009 comment letter -- so the board did ours. BP also had a comment letter -- opposing the rules, saying that the industry's current safety and environmental statistics demonstrate that the voluntary, voluntary programs implemented have and continue to be very successful and amazingly stated that they are extensive, prescriptive regulations.

And I would say that the voluntary nature is -- is impossible. And I just -- I stress to you that they must be restrictive.

We had someone from industry up here talking about that, to make them voluntary, to make these rules voluntary. And I don't believe that that is appropriate. We need them to be prescriptive, we need them to be inspected, and we need them to be enforced.

In addition, a cultural change at the platforms seem to be needed. And, while, again, I don't know the interworking of the platform culture

or the exact reason for the blowout, it seems obvious that human behavior, human factors could have played a significant role and could prevent future calamities.

I'm convinced by experience and readings that in high-stress industry, human factors does play a role in industry outcomes. While human factors take on many areas, what seems to be a common theme is the issue of communication. And that was also brought up here today, the issue of communication.

In a 2010 article written by John Hofmeister, he states that the industry must consider how platforms operate, how they are led, and how people work together.

Again, something that was brought up today.

In another study by Harvard Business School and Stanford faculty researchers, they found that, studying offshore oil rig, human environments can enhance safety and reliability. They showed that when management did extensive training to make safety a top priority, the benefits became obvious. Learning from failure was emphasized as opposed to platforms where failure was punished. Again, a common theme that we heard today.

More open communication gradually led to behavioral changes with willingness to ask questions, to listen, to admit mistakes, and acknowledge need to depend on advice or assistance of coworkers.

So we have research in this field. We have folks in the industry who are practicing it and with apparent success.

In conclusion, a safe work environment in a dangerous and stressful job is challenging, but not impossible. Industry is key to providing leadership. But regulation, enforcement, accountability, and transparency are key to ensure safety to the workers and strong environmental protections to our precious coast.

Thank you very much.

DIRECTOR BROMWICH: I want to thank all five of you for your comments and your observations.

Let me just make a couple of comments because some of the things that you've said are so important and resonate so much.

In terms of the entire regulatory scheme and the regulatory climate, we're at the beginning of a sea change in that.

I think many of you know that there are a

large number of investigations that are currently ongoing into the root causes of the Deepwater Horizon blowout. Those are exploring equipment failures, human failures, and regulatory shortcomings.

Even before the results of those multiple investigations by the President's Commission, the National Academy of Engineering, Congress, and others, my agency and the Department of the Interior are hard at work developing a comprehensive new set of regulations.

Drilling safety and environmental regulations have already gone into effect. There will be additional drilling safety regulations imposed in the near future. There is a safety and environmental rule that is going to be forthcoming in the next month or so. And that is even before, again, we get the results of the investigations.

There is an active piece of work that's being done by the Safety Oversight Board that Secretary Salazar appointed that is going to be providing to him a set of recommendations that relate to the work of my agency as well.

So it sometimes, unfortunately, takes a tragedy like the Deepwater Horizon blowout to get

the sustained attention that's necessary for a dangerous enterprise like deepwater drilling to take place in the way it needs to take place.

But that effort is ongoing. And I think what you'll find is a set of rules that are far more demanding and that have many more requirements next week and next month than they did just a few months ago.

With respect to the inspector issue -- I think Mayor Connell mentioned that -- you're quite right. There is a lot of concern about where we're going to get the talented, capable, and knowledgeable inspectors that are needed to do inspections on the rigs here, but even more in the Gulf where the understaffing has really been a nightmare.

There has been in the past historical complete dependency on industry. And I think people with industry experience can play a vital role in providing the kind of knowledge and expertise to provide good inspections.

But we're exploring and we're looking forward to any suggestions or comments that you or others have on ways to substantially broaden the recruitment pool.

We're going to reach out to schools of engineering and schools of petroleum engineering, particularly in the Gulf, but also here in California, to find out whether we can help to devise career paths that will be attractive to people who want to do public service through being inspectors on oil rigs. So this is very much an issue that has our attention and has our focus.

And then, finally, with respect to spill response, I think you know that the three principal underpinnings of the current deepwater drilling moratorium are drilling and workplace safety, and that's been the primary focus today, but also spill containment and spill response.

And the kind of attention that should have been given to spill response and spill containment is now being given to it. And the resources that should have been given to it are now being given to it.

I think most of you have heard about the joint enterprise of four of the major oil companies to invest a billion dollars into the kind of spill containment resources that simply didn't exist when the Deepwater Horizon tragedy occurred. That will be, I think, enormously helpful.

By the same token, industry and academia are now focusing on spill response in ways that they have not before. There are industry trade groups that are going to be coming out with reports in the next week.

I have asked and BP has said that we will be getting a lessons learned document from them, both on spill containment and spill response. And I specifically asked them to tell us what failed as well as what worked.

So I think we will have a very substantial body of knowledge very soon -- we're already accumulating it right now -- that we should have had before, but we didn't. But now we will. And I hope that will put us in a much better position to deal with drilling and particularly deepwater drilling in the future than we have been in the past.

So I just wanted to update you all on some of the things that are going on both in my agency and the Interior Department generally and the federal government more generally and what private industry is doing as well.

So, again, I want to thank you for your contributions. I want to thank you for your hospitality. It's a pleasure being here in Santa

Barbara. And this will be the end of our fourth out of eight forums that we're conducting on deepwater drilling. So thanks again.

(Proceedings adjourned at 12:30 p.m.)

I, REAGAN EVANS, RMR, CRR, CLR, CSR NO. 8176, in and for the State of California, do hereby certify:

That said proceedings were taken down by me in shorthand at the time and place therein named and thereafter reduced to typewriting under my direction, and the same is a true, correct, and complete transcript of said proceedings;

I further certify that I am not interested in the event of the action.

Witness my hand this 30th day of August, 2010.

REAGAN EVANS, RMR, CRR, CLR
CSR NO. 8176
Certified Shorthand
Reporter for the
State of California